# 2020

# MATERNITY QUALITY & SAFETY PROGRAMME

## ANNUAL REPORT

Enhancing Women's Health – Engagement, Equity, Excellence
Tītikena ō Wahine Hauora – Te whakahihiko, Te ōrite, Me te kairangi

Capital & Coast
District Health Board
ŪPOKO KI TE URU HAUORA

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**Enahara taku toa i te toa takitahi Engari, he toa takitini**

**My successes are not mine alone, they are ours – the greatest successes we will have are from working together**

***- Māori proverb***

# ACKNOWLEDGEMENTS

Thank you to the many administration, midwifery and medical staff who have contributed to the content of this report.

Thanks especially must go to our Maternity Quality & Safety Programme (MQSP) team including Belinda Bennett, Erika Brons-Ware, Carolyn Coles, Siobhan Connor, Simone Curran-Becker, Rose Elder, Claire Jacobs, Shelley James, Rhondda Knox, Sarah le Leu, Joshua Nerona, Cherie Parai, Rachel Pearce, Freyja Phillips, Jenny Quinn, Victoria Roper, Gwen Ryan, Emma Skudder, and Hannah Ward, who put in an extraordinary effort throughout an incredibly challenging year.

It is with genuine appreciation that we thank our workforce, consumers, lead maternity carers (LMCs) and wider health care partners and communities without whom we would not have been able to provide our well respected and professional maternity service.

Finally, we wish to thank all the staff and whānau who kindly let us use their images throughout this report.

# REPRODUCTION OF MATERIAL



# BIRTHING POPULATION TERM

While CCDHB acknowledge that not all pregnant people identify as female in gender, for the purposes of this report we have referred to the birthing population as female. That is, the sex that can bear offspring or produce eggs. For clarity we have used female nouns, such as woman, women, and māmā throughout this report.

# FOREWORD

Capital & Coast District Health Board's maternity services are pleased to present their Maternity Quality and Safety Programme Annual Report 2020.

2020 was a challenging year. When the COVID-19 pandemic officially reached our shores in early 2020, New Zealand introduced stringent elimination measures which culminated in the entire nation being placed into a Level 4 lockdown from March 25.

These COVID-19 restrictions saw most overseas travel cease, with the introduction of social distancing, masks, online meetings and the use of hand gel becoming everyday practice.

This report describes projects implemented and key achievements made during the 2020 calendar year.

Despite the restrictions and challenges that COVID-19 placed, the maternity service used the lockdown wisely to progress the following key initiatives:

- A model of care that provides continuity of midwifery carer for Māori and Pacific hapū māmā living in Porirua city.
- An enhanced recovery after elective Caesarean section pathway.
- Maternity Clinical Indicators Qlik application.
- Implementation of the Newborn Observation Chart / Newborn Early Warning Score.
- GAP baseline audit.
- Pre-labour preterm rupture of membranes pathway.
- Preterm birth audit outcomes and recommendations.

Thank you to all those healthcare professionals who provided care to pregnant women at Wellington Regional Hospital, Kenepuru and Paraparaumu Maternity Units. Your ongoing dedication, professionalism and passion will ensure that pregnant women and whānau residing in our community receive the best possible care.

Special thanks also to Claire Jacobs (Data Manager) and Victoria Roper (MQSP Coordinator).

We hope you enjoy reading our report.

*Carolyn Coles, Director of Midwifery, and*
*Rose Elder, Clinical Leader of Obstetrics*

*Carolyn Coles, Director of Midwifery*

*Rose Elder, Clinical Leader of Obstetrics*

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# Kupu Whakataki
# Introduction

# CAPITAL & COAST DISTRICT HEALTH BOARD VISION AND VALUES

CCDHB is committed to meeting the Minister of Health's expectations and delivering our vision of: Keeping our community healthy and well.

As a health care provider, we work three core values. These are:


- Manaakitanga is at the heart of Māori tikanga. We care for a person's mana by expressing hospitality, generosity and mutual respect.
- Kotahitanga focuses on unity and collective action. We work in a fair and just way with each other and with the communities we serve.
- Rangatiratanga challenges us all to use our personal power with absolute integrity to serve our communities and provide the best health services we can. We trust people to share power, influence and decision-making.

# WOMEN'S HEALTH SERVICE VISION

The vision for the Women's Health Service was developed using contributions from each department within our service. The vision is a culmination of those words most frequently used by each department. The vision was launched at the end of 2019.

**Tītikena ō Wahine Hauora: Te whakahihiko, Te ōrite, Me te kairangi**

**Enhancing Women's Health: Engagement, Equity, Excellence**

# KOWHAIWHAI

The CCDHB kowhaiwhai depicts growth, development and the interactions between a person and their environment. The manawa (kowhaiwhai) is the heart line that leads to Ngā Kete o Te Wananga (the three baskets of knowledge). These connect the past to the present using the knowledge and experiences of old and new, to strengthen future generations.

# STRATEGIC ALIGNMENTS

Taurite Ora: Māori Health Strategy 2019 - 2030

Pacific Health & Wellbeing Strategic Plan for the Greater Wellington Region 2020-2025

New Zealand Health Strategy: Future direction

Living Life Well – A Strategy for mental health and addiction 2019-2025

Health System Plan 2030

New Zealand Maternity Standards

National Maternity Monitoring Group recommendations

Perinatal and Maternal Mortality Review Committee recommendations

Maternal Morbidity Working Group recommendations

Pae ora – healthy futures

Whakamaua: Māori Health Action Plan 2020-2025

# Ō mātou tāngata – he aha ai, he pēhea hoki

# Our People – Why and how

# THE CCDHB REGION

CCDHB is the provider of health services to residents living in the Kāpiti Coast District, Porirua City and Wellington City.

CCDHB is the seventh largest District Health Board (DHB) in the country by population. Its population density is the second highest – serving an estimated 324,000 people (6.4% of the New Zealand population), and covering 740 square kilometres. Just over two thirds of the population reside in Wellington City, while 18% reside in Porirua, and 14% in Kāpiti.

The region has fewer than average Māori (11%) and higher than average Pacific (7%) populations compared to other DHBs. Over 80% of the Wellington population identify as an 'other' (non-Māori, non-Pacific) ethnic group.

The CCDHB population tend to be younger than the national average with just over 42% of the population under the age of 29 years. Age structures however differ by ethnicity and between geographic areas. The regional population differs from the maternity population.

While many of the regions people were relatively advantaged, there are significant pockets of socioeconomic deprivation focused in Porirua, particularly east Porirua and small parts of central Wellington and the Kāpiti coast.

The region's population is predicted to increase over the next few years by 4.5% or an additional 14,000 people by 2022/23.


## WE PROVIDE TERTIARY MATERNITY SERVICES ACROSS THE CENTRAL NEW ZEALAND REGION

The WHS is responsible for tertiary maternal transfers from the central region of New Zealand, which includes Whanganui, MidCentral, Hawkes Bay, Wairarapa, Hutt Valley, and Capital & Coast DHBs. The central region makes up 19% of the total New Zealand population. The WHS is also responsible for maternal transfers from Nelson Marlborough DHB, which is outside of the central region.

The CCDHB maternal fetal medicine (MFM) service provide sub-specialist care. They are part of a national network with sub-specialists in Canterbury and Auckland DHBs.

The multidisciplinary diabetes and endocrine antenatal clinic provides tertiary pre-conception counselling and pregnancy care to women with complex needs who live in the Hutt Valley and Wairarapa DHBs.

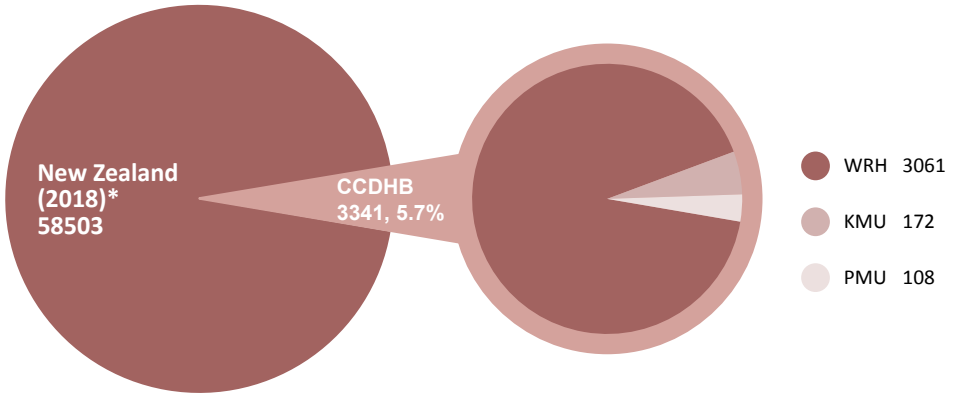
A multidisciplinary team provides care for women with complex cardiac conditions during their pregnancy and birth from the lower North Island and the Nelson Marlborough region.

Wellington Regional Hospital accepts maternal transfers from outside the central region when neonatal units elsewhere in the country have reached capacity. The neonatal intensive care unit (NICU) provides tertiary healthcare services to premature, surgical, and sick newborns, and while not part of the Women's Health Service, works closely with the WHS team.

# THE MATERNITY POPULATION

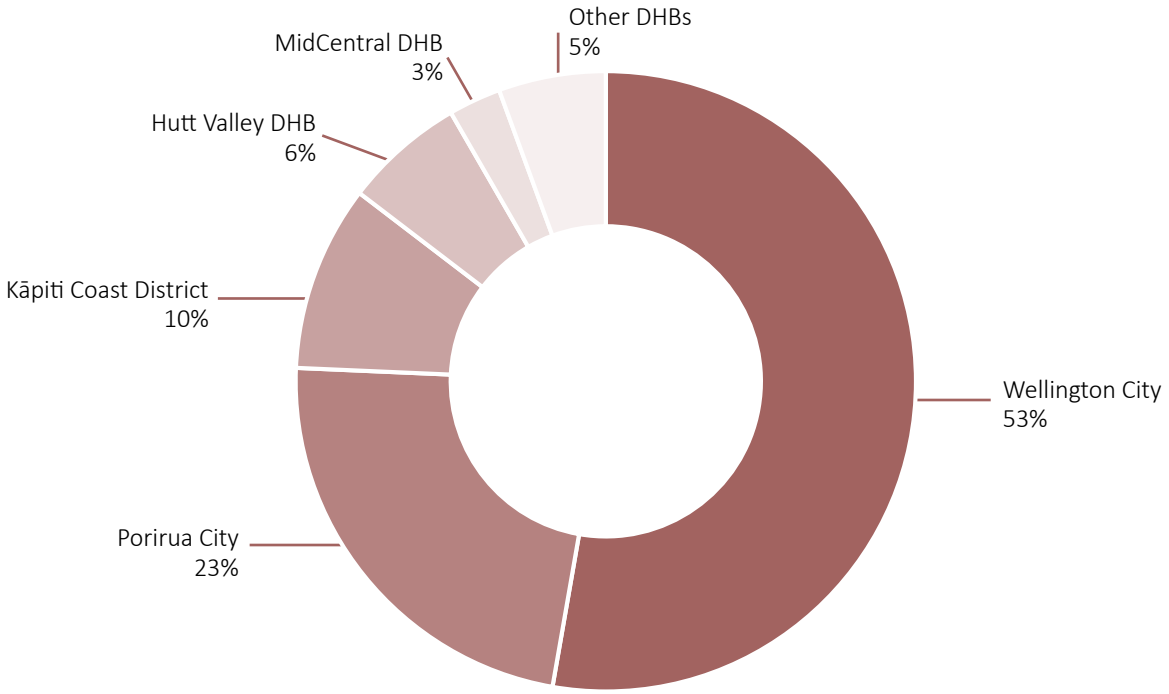
There were 58,503 women recorded as giving birth in New Zealand in 2018, according to the Ministry of Health (MOH) Report on Maternity web tool, released in 2020. During 2020, CCDHB recorded 3341 women who either birthed at CCDHB facilities, had an unplanned birth at home, or birthed in transit, en route to hospital. CCDHB births equate to 5.7% of the birthing population of New Zealand.

## Women birthing at CCDHB 2020, by birthing facility




* (New Zealand Ministry of Health, 2020)

## Where are our women from?



## The CCDHB birthing population in 2020

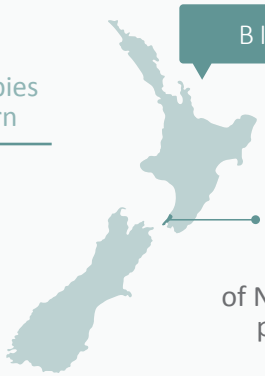
How do they compare to the New Zealand average? New Zealand data is sourced from the Ministry of Health Qlik Sense hub for the year of 2020.

**111 WOMEN BIRTHED AT HOME**

**3341** women birthed **3425** babies born

That's an average of **9** babies born each day

### BIRTHS



**6%** of NZ birthing population

### PARITY

CCDHB women are more likely to be first time mothers **(48%)** than women nationally **(41%)**

### DOMICILE

**12%(408)** of women transferred from other DHBs to give birth

### CCDHB RESIDENT WOMEN ARE FROM

- **62%** Wellington
- **27%** Porirua
- **11%** Kāpiti Coast

### BIRTH FACILITY

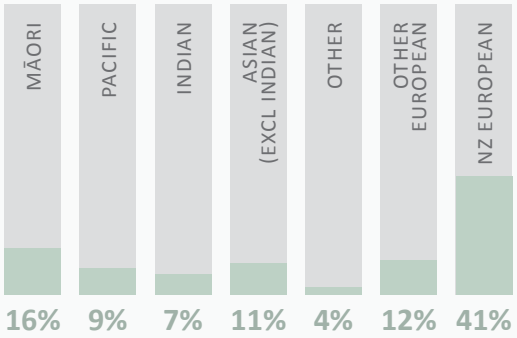
**87%** of CCDHB resident women birthed at a Tertiary Hospital

**8%** of CCDHB resident women birthed at Primary Birthing Units

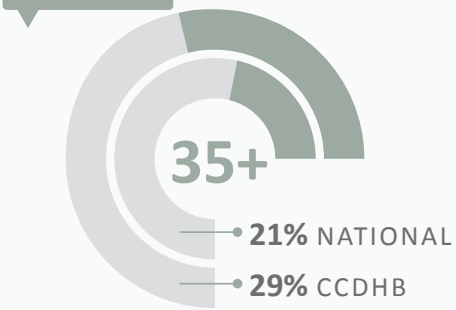
**4%** of CCDHB resident women birthed at home

### ETHNICITY

CCDHB has fewer Māori and more European mothers than the national average




### AGE

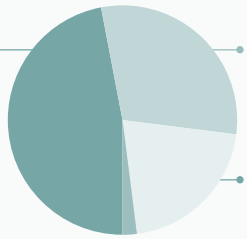



**CCDHB MOTHERS ARE OLDER THAN THE NATIONAL AVERAGE**

### BODY MASS INDEX

At the time of booking, CCDHB women were more likely to be in the healthy weight range and less likely to be obese than women nationally

**47%** were in the healthy weight range



**30%** were overweight

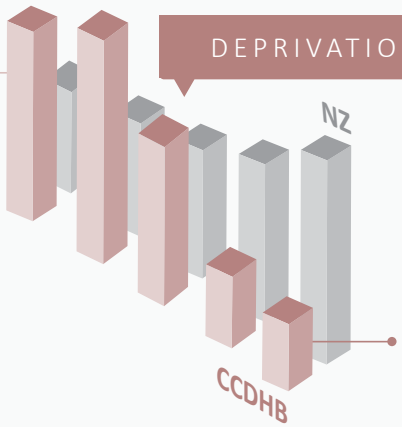
**21%** were obese

### REGISTRATION

**80%** of CCDHB women who registered with an LMC, did so in the first trimester

### DEPRIVATION

**27%** Higher than average amount of mothers living in the least deprived quintile (NZ Dep 2013)




Fewer than average living in the most deprived quintile

**10%**

### SMOKING

**5%** of CCDHB women were smokers at 2 weeks postnatal – fewer than the national average

**16%** of Māori women were smokers at 2 weeks postnatal (7% fewer than the national average) – a decrease of 2% from 2019

# MATERNITY FACILITIES

Birthing facilities are available at three locations – Wellington Regional Hospital, Kenepuru Community Hospital and Kāpiti Health Centre.

## WELLINGTON REGIONAL HOSPITAL (WRH) – PRIMARY, SECONDARY, AND TERTIARY


**Birthing suite**
Twelve labour and birth rooms with pools
One operating theatre

**Ward 4 North Maternity**
Twenty six resourced maternity beds
One bereavement room
Two assessment beds for LMCs (not resourced)

**Acute Assessment Unit**
Five assessment rooms
Four additional assessment spaces

## KENEPURU MATERNITY UNIT (KMU) – PRIMARY

Eight bed capacity

Two birthing rooms

One birthing pool

Six postnatal rooms

## PARAPARAUMU MATERNITY UNIT (PMU) – PRIMARY

Three bed capacity

One birthing room

Two postnatal rooms

**A virtual tour of our three facilities can be accessed at CCDHB website: www.ccdhb.org.nz/our-services/maternity/giving-birth-at-our-hospitals/.**

# MATERNITY SERVICES

## EARLY PREGNANCY SUPPORT

The 'Find a Midwife' service supports women to find a midwife LMC. Early pregnancy (0-14 weeks) education is available for women free of charge at WRH, while they are looking for a midwife.

The service is accessible online at at www.ccdhb.org.nz/our-services/maternity/contact-us-for-help-finding-a-midwife/, or by calling 0800 346 369.

## PREGNANCY AND PARENTING CLASSES

Free childbirth and parenting education classes are provided at Kenepuru and Paraparaumu Maternity Units. These classes were established to provide greater access for Māori, Pacific, and migrant women.

The DHB also funds childbirth education through community based external providers.

The objective is to increase the number of first-time pregnant women accessing antenatal education, and improve health outcomes.

## PRIMARY BIRTHING

Women are often guided by the experiences of friends and whānau when deciding where to birth. CCDHB encourages well women with normal healthy pregnancies to consider having their babies in a primary birthing setting. There are known benefits to primary birthing for women and no differences in outcomes for babies based on New Zealand and international birthing outcomes. Evidence suggests that women's experience and outcomes are better when a well woman, with a healthy baby, chooses to labour and birth in a primary maternity facility.

Primary birthing options in central Wellington are currently limited. The Birthing Suite at WRH has a Koru room which was developed to support women who want a primary birth. Kenepuru and Paraparaumu Maternity Units are primary birthing units, where women can have a natural birth without intervention, with a midwife in attendance.

KMU and PMU are both actively promoted by the midwife LMCs working within these areas. Familiarity with the units is encouraged for women having antenatal assessments and cardiotocograph (CTG) monitoring. LMCs use this assessment time as an opportunity to show women and whānau around the facilities.

## BREASTFEEDING EDUCATION AND SUPPORT

Baby Friendly Hospital Initiative (BFHI) accreditation, which supports and promotes the protection of breastfeeding in hospital is a MOH requirement for all maternity facilities in New Zealand. 2020 was the second year of a four yearly accreditation cycle for CCDHB. The clinical midwife specialist (lactation)/BFHI coordinator is involved in developing and implementing standards of midwifery/nursing practice around lactation, and also educational requirements to meet recertification requirements.

Free breastfeeding classes are provided by the lactation clinical midwife specialists at WRH and KMU, on a monthly basis. These sessions complement the pregnancy and parenting classes. Mandarin breastfeeding classes are also provided on alternate months in the Johnsonville Plunket Family Centre and are run by a peer counsellor. The impact of COVID-19 throughout 2020 meant that often these classes couldn't be run as scheduled. In response to COVID-19 Alert Level changes, additional classes were arranged for women who had their classes postponed.

Little Latch On is a one-hour inpatient education and support session provided by midwifery staff to

women on the postnatal ward at WRH. In addition to group support, women receive one-on-one specialist advice for complex feeding issues. Due to social distancing requirements and midwifery vacancies, we were only able to provide limited sessions.

All women who have a baby in CCDHB facilities are offered free breastfeeding support in the community. The community breastfeeding team is comprised of the community lactation specialist and the Pacific breastfeeding team, which comprises two breastfeeding advocates and a registered midwife with a particular focus on working with Māori and Pacific women, and those with complex needs.

The team support breastfeeding in hospital, the woman's home, breastfeeding centres, and by phone consultation. Together, they staff the Breastfeeding Centre for women to drop in and receive breastfeeding support and advice. The Breastfeeding Centre is hosted and located at Ora Toa Health Service, Porirua. This service was impacted by COVID-19 and was only able to run during Alert Level 1.

## SECONDARY AND TERTIARY CLINICS

Secondary and tertiary level care is provided to women who require obstetric referral for consultation, or transfer of care during their pregnancy. Women are referred to clinics (for a range of conditions) through their General Practitioner (GP) or LMC. Referral may relate to existing medical conditions, or high risk care planning and follow-up for those who have suffered the loss of a baby.

## WOMEN'S ULTRASOUND SERVICE

The women's health ultrasound service provides a critical role in the evaluation and monitoring of pregnant women. Specialised imaging is provided to support clinics, and for regular monitoring of complex pregnancies. This department also provides expertise in fetal sonography to support women requiring care through the MFM service.

## MATERNAL FETAL MEDICINE

MFM is a tertiary level sub-specialty service which provides care to women who have complex pregnancies. The WHS provides one of three MFM hubs in New Zealand. As the central hub, they provide care to the lower North Island and the upper South Island.

The MFM service is also a training centre for future MFM sub-specialists and obstetricians with an interest in fetal medicine.

Teleconference facilities for consultation are enabled for the central hub catchment.

The services MFM specialises in:

- the management and supervision of high-risk first and second trimester screening results by:
- provision of non-invasive pre-natal testing
- diagnosis by chorionic villous sampling or amniocentesis
- diagnosis and management of major and complex fetal anomalies
- management of fetal cardiac anomalies that are unlikely to require immediate cardiac surgery
- management of other cardiac disease
- intrauterine transfusions for red blood cell incompatibility
- multi-fetal reduction and feticide
- management of fetal genetic conditions in pregnancy
- management of fetal surgical conditions in pregnancy
- input into the care of women with complex medical conditions.

# WORKFORCE

Midwifery services at CCDHB are suitable and fit for purpose. There is a formal framework, regular monitoring and leadership in place to ensure that high standards of care are delivered for women, pēpi, and whānau across our region.

There is robust data collection and analysis through the Maternity Quality Safety Programme to inform decision making and address current workforce issues. The DHB is committed to the Midwifery Accord, to address safe staffing and workload in a joint project with the Midwifery Employee Representation & Advisory Service and the New Zealand Nurses Organisation. There is also national monitoring in place through the Perinatal and Maternal Mortality Review Committee (PMMRC), Health Quality and Safety Commission (HQSC) and National Maternity Monitoring Group (NMMG) quality programmes who ensure DHBs are engaged and working responsively.

The following is also in place to ensure safe and supported care for our communities and support our midwifery workforce:

- Midwives working elsewhere in the organisation have been redeployed to provide additional support
- Senior midwives work clinically each week, to support caseloads and capacity
- A new model of care at Kenepuru maternity unit has been introduced—working closely with Te Ao Marama Midwifery Tapui Ltd and other community-based LMCs to improve outcomes for wāhine, pēpi, and whānau of Porirua
- Work is underway in collaboration with Victoria University and Otago Polytechnic to improve the wellbeing of student midwives
- There is now a more flexible process for new graduates to the midwifery programme (inclusive of Australian graduates) throughout the calendar year
- Student midwives are employed as maternity support workers and act at the level of Health Care Assistant Roles. They provide further support to new parents and pregnant women, and assist midwives by carrying out non clinical tasks. These roles are an important part of preparing graduate midwives for the future and supporting them financially as students.

# PĒPI ORA

In 2019 CCDHB commissioned an external design agency, DNA, to do qualitative research to understand the lived experiences of pregnant women and mothers of young children in the Porirua region. The intention of this was to help inform the CCDHB's Māmā, Pēpi and Tamariki programmes of work.

The findings of this research project highlighted a need to create a visible, accessible online space for parents to be able to find out about, and have easy access to, all local services that are available to them in the perinatal & first 1000 days space.

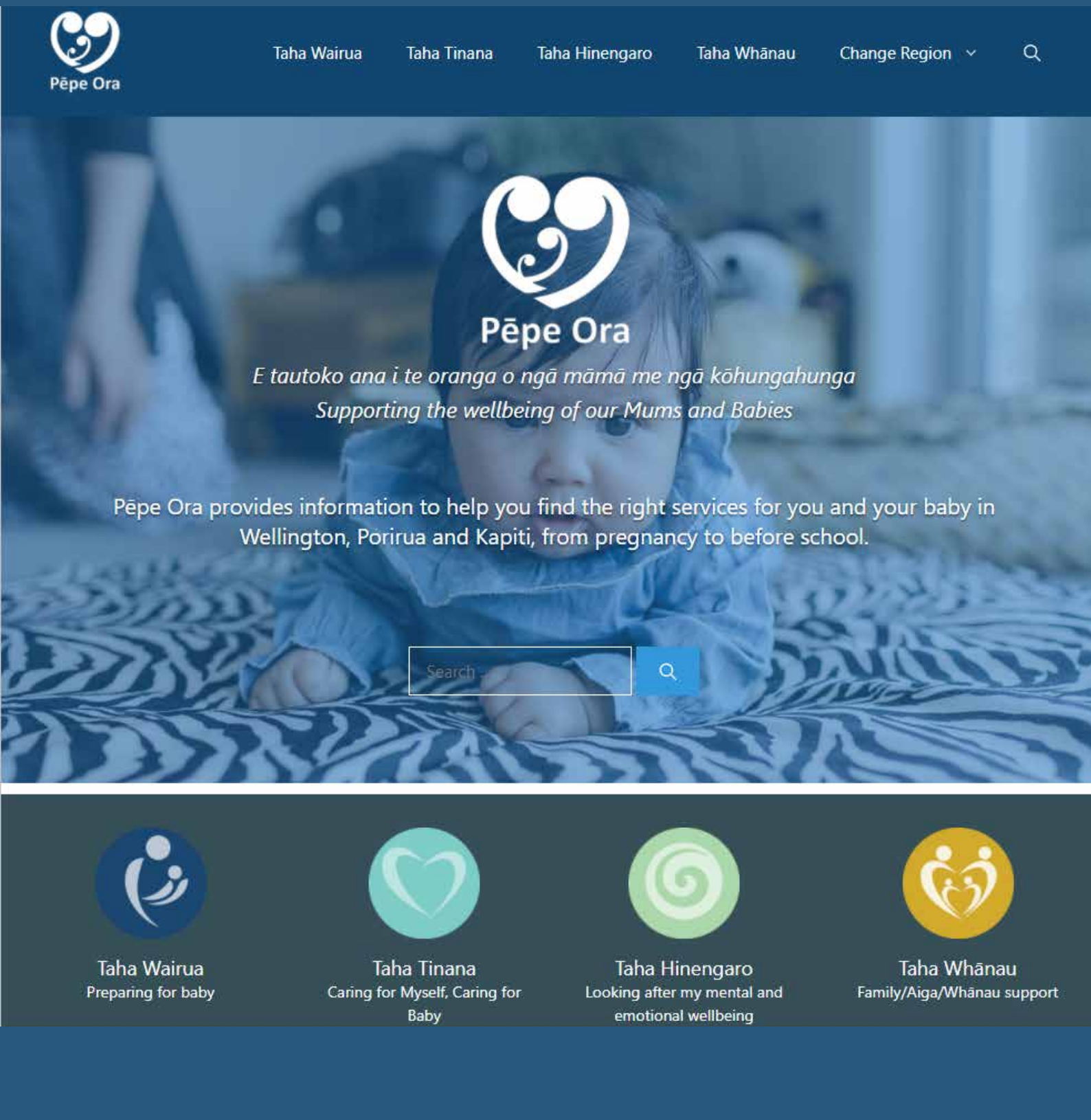
The Wairarapa Pēpe Ora online touch point has been successfully underway since 2018. The Pēpe Ora Wairarapa team supported the development of a sister CCDHB Pēpe Ora website. The site aligned with their vision to collaborate across Capital & Coast, Hutt Valley, and Wairarapa DHBs to create a familiar touch point for consumers moving around the region.

Funding was allocated to the development and implementation of Pēpe Ora from Strategy, Planning & Performance.

The Pēpe Ora project in CCDHB was initiated by Rachel Pearce & Shelley James. In April 2020, Sarah Le Leu replaced Rachel Pearce, and was then joined by Vic Parsons in October to implement and populate the website with services content. SWV productions (Wairarapa) managed the build of the website.

The website will mirror the already successful Wairarapa website and will be broken down into easily accessible sections that cover preparing for baby, caring for yourself and caring for your baby, looking after your mental and emotional wellbeing, and whānau support. Within each section are clickable headings such as 'Find a midwife', 'Places to give birth', and 'Keeping baby safe while sleeping'. These headings have information embedded in them such as the find your midwife website and phone number, descriptions of the different place of birth options in Wellington with links to virtual tours, or videos on safe sleeping with information about how to get involved in making a wahakura.

The website is due to go live in June 2021.


Pēpe Ora
Taha Wairua
Taha Tinana
Taha Hinengaro
Taha Whānau
Change Region
Pēpe Ora
E tautoko ana i te oranga o ngā māmā me ngā kōhungahunga
Supporting the wellbeing of our Mums and Babies
Pēpe Ora provides information to help you find the right services for you and your baby in Wellington, Porirua and Kapiti, from pregnancy to before school.
Search ...
Taha Wairua
Preparing for baby
Taha Tinana
Caring for Myself, Caring for Baby
Taha Hinengaro
Looking after my mental and emotional wellbeing
Taha Whānau
Family/Aiga/Whānau support

# Te kounga me te haumaru o te taurima wāhine hapū

# Maternity quality and safety

# MATERNITY QUALITY AND SAFETY PROGRAMME

The WHS clinical governance committee, as part of the DHB clinical governance infrastructure, ensures that systems are in place to enable clinicians and managers to share responsibility and accountability for patient safety, to minimise risks to women and their babies and to continuously monitor and improve the quality of clinical care provided.

The New Zealand maternity quality and safety programme is a national programme which establishes and builds upon national and local maternity quality improvement activities. It seeks to ensure the highest possible safety and best possible outcomes for all mothers and their babies.

This report is underpinned by the three New Zealand Maternity Standards (New Zealand Ministry of Health, 2011), which are overseen by NMMG.

- **Standard One:** Maternity services provide safe, high quality services that are nationally consistent and achieve optimal health outcomes for both mothers and babies.
- **Standard Two:** Maternity services ensure a woman-centred approach that acknowledges pregnancy and childbirth as a normal life stage.
- **Standard Three:** All women have access to a nationally consistent, comprehensive range of maternity services that are funded and provided appropriately to ensure there are no financial barriers to access for eligible women.

CCDHB received congratulations from the MOH on the excellent report produced in 2019.

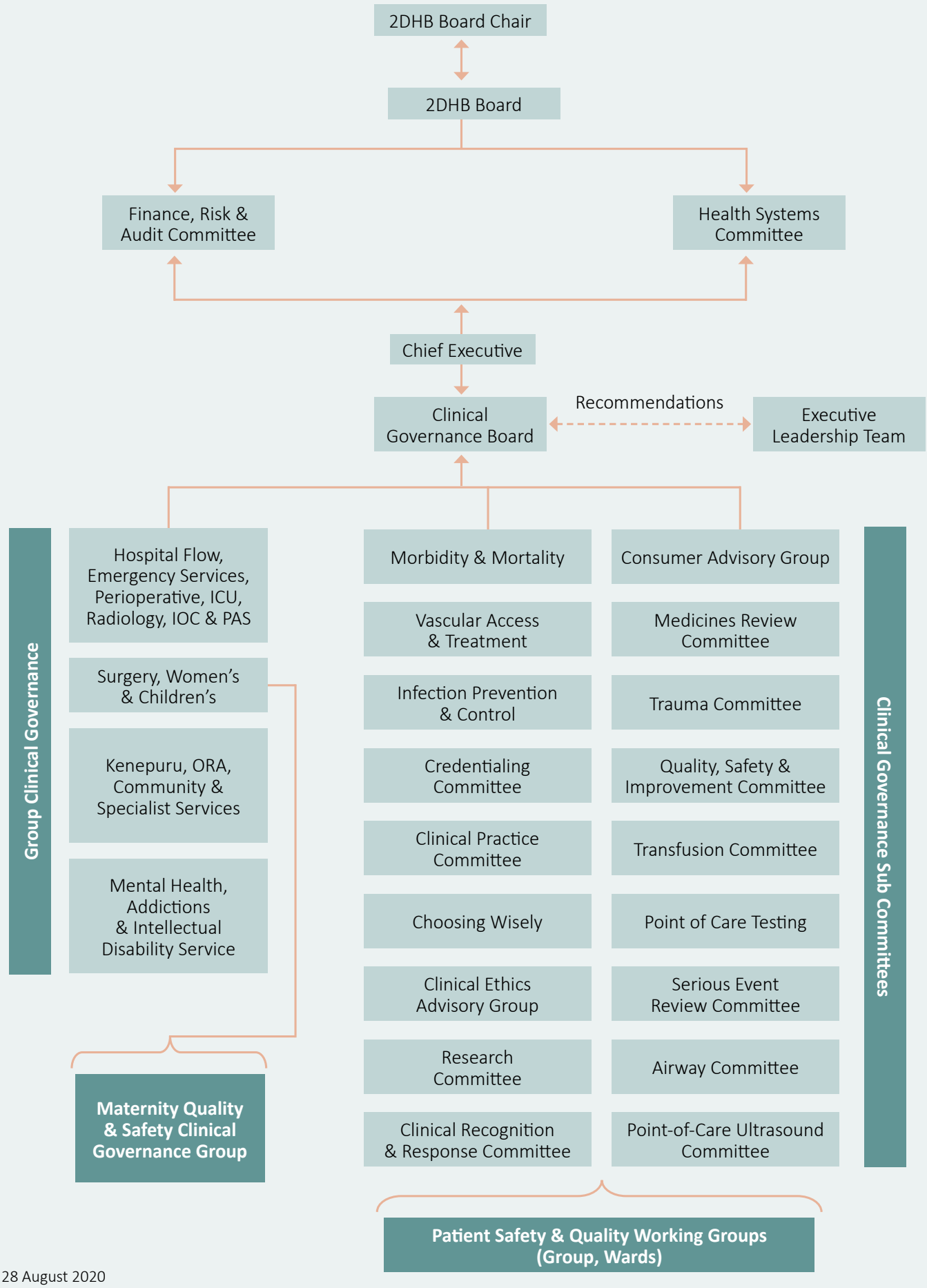
At CCDHB, governance of the programme was undertaken by the MQSP governance committee.

Membership included: representation from consumers and LMC midwives, obstetric and midwifery clinical leads, an MQSP coordinator, an operational lead, and a representative from Strategy, Planning & Performance. Both Māori and Pacific communities were represented. Representation from other stakeholder groups is co-opted on a project-by-project basis throughout the year.

The work programme was developed with stakeholder input and key actions were identified. A record of ongoing achievements to date is contained in previous WHS annual clinical reports. The 2020 report is publicly available online through the CCDHB website at *www.ccdhb.org.nz/news-publications/publications-and-consultation-documents/ccdhb-whs-2020-maternity-quality-safety-programme-annual-report.pdf*.

Our MQSP is well established and we continue working towards embedding maternity quality into a strategic quality framework to improve outcomes for women and their babies.

## *Figure 1:* CCDHB Clinical Governance Structure 2020




28 August 2020

# VOICES FOR WOMEN AND THEIR WHĀNAU

Woman and whānau continue to provide the WHS with feedback about our maternity services in a number of ways, and is much appreciated.

Consumer survey posters are displayed around the wards, and can be accessed as inpatients by scanning a quick response (QR) code. For consumers who prefer to reflect and feedback at a later date, a feedback card is placed inside the Well Child Health Book for this purpose.

Women also share their experiences and perspectives with their LMCs and these experiences are discussed at the bi-monthly LMC forums run by our representatives. This feedback is then brought to the attention of the MQSP Governance committee.

Finally, our consumer representatives spend time engaging with a diverse range of women and whānau, seeking their valued thoughts and experiences on our services. Any suggestions or concerns are discussed and actioned as required.

The following is a selection of feedback received:

- "All the staff have been incredibly helpful with making my transition into motherhood so much less daunting! The help was polite and personable and made me feel really comfortable. Thank you all."
- "All of the people who I met were kinder and more supportive than I could've imagined."
- "The care was superb. We felt included in the process and were confident in the care my wife and newborn were receiving. Explanations were clear and individualised and the interaction between the LMC and obstetric team were smooth and collaborative. On the Postnatal Ward, we continued to receive exemplary care. The midwifery team was supportive and fostered independence but also mindful of when support needed to be increased. The broader health care team, including cleaners, were also kind and we felt grateful for delivering at Wellington Hospital."
- "We had a wonderful positive experience having our second baby at the maternity unit in Paraparaumu Maternity Unit. A quiet peaceful environment with fantastic support. I felt very cared for. A big thank you to the midwives."
- "Blown away by the warm welcome of staff as soon as we walked in. Staff were very friendly and catered to everything we needed. We are very grateful for the support and advice given to us by the midwives."
- "Considering the hospital midwives were run off their feet, they were courteous and kind when they checked on me. I do think it's a stressful and slightly unreal experience giving birth and much more care and help needs to be given to new Mums before they leave the hospital."

**Action:** Staff are reminded to check in with mothers about their needs. Availability of staff differs with acuity and other demands – women are our priority and using the call bell when staff are needed is important, rather than waiting for someone to pop in.

# ENGAGEMENT WITH STAKEHOLDERS ACROSS CCDHB

Meeting structures that support the MQSP through collaboration, information sharing and education, included monthly multidisciplinary maternity meetings and interface meetings between LMCs and WHS management held at WRH. Local interface meetings were held in the two primary birthing units. These meetings enabled effective two-way communication between governance and clinicians so that information about current issues, impending changes, improvements and policy updates were all shared. The increasing emphasis on multidisciplinary team work was fostered by joint educational events.

- Perinatal mortality and morbidity review meetings brought together obstetric, midwifery, neonatal staff, genetics, pathology and paediatric surgery for case review. Recommendations on systems and practice changes were fed back to relevant areas or to the clinical governance group.
- Morbidity and mortality meetings, brought gynaecology and maternity together to review cases of significance.
- Birthing suite held weekly lunchtime fetal monitoring meetings for easy access for hospital staff and LMCs. Cases of interest were discussed, with an emphasis on recognition of risk factors and interpretation of fetal monitoring.
- Alternative meeting options, such as Zoom©, were set up and continue to be an option to increase attendance.
- CapitalDocs, the CCDHB electronic information system, contained all current policies and guidelines.
- Email was used to disseminate information to staff and LMCs about educational events, current articles of interest public safety alerts and new directives especially related to COVID-19 updates.
- Healthpoint was available to both clinicians and consumers. Text messages and social media were used increasingly to advise women of events and to remind them of appointment times and dates.
- The provision of a 'free to air' education channel at WRH's maternity ward, and DVDs at the primary maternity units provided a source of information to women and their whānau while they remain inpatients.
- Posters and fliers were used for initiatives such as the 'Preterm Birth' campaign for use in General Practice, for Primary Health Organisations (PHOs) and LMCs.

# EDUCATION

## CULTURAL COMPETENCY EDUCATION

The WHS invited Engaging Well Limited to deliver their training course based on cultural competency, as part of the Engaging Effectively with Māori, Professional Development Programme. The course was a three session programme delivered by Hone Hurihanginui and was incredibly powerful and well received.

The course examined health inequity and its causes, bias including racism, the colonisation of Aotearoa,

cultural identity including rituals of encounter, the importance of names in relationship centred care, and Te Tiriti o Waitangi – The Treaty of Waitangi, including: Treaty principles, and how to operationalise the Treaty.

Participants were able to define and describe culturally competent and culturally intelligent practice, and were challenged about the importance of proficient pronunciation of Māori words and names. Participants also learned to design a Treaty of Waitangi Framework for operationalisation within any institution of Aotearoa – New Zealand. Te Reo and Tikanga within a number of varied contexts were explored.

Everyone present walked away profoundly affected. It exposed people to new knowledge and a fresh understanding of Te Reo and Te Tiriti o Waitangi, and institutional racism within our health sector, and how to challenge that racism, not by just being "not racist", but by becoming "anti-racist".

Another amazing and impactful speaker was Jude Simpson, the NZ Police employed Family Harm Training Advisor. Jude is an accomplished presenter who has lectured throughout the country. She was recognised in the 2018 Queens Birthday Honours with the Member of New Zealand Order of Merit for her work addressing family violence. Her powerful presentation is recommended for health professionals, especially around how we can make a difference for women experiencing family harm.

A survivor of family violence having experienced childhood abuse and becoming caught up in a cycle of domestic violence, substance abuse and crime, Jude is passionate about using her experience to help people understand the world of family harm.

From the victim's perspective, to bringing about change in our homes, workplaces, organisations and communities. Jude shared a harrowing yet triumphant personal story that centred on the necessity of frontline health workers, to always bring empathy into our care, and leave judgement out. Jude was another amazing speaker willing to share her personal story to benefit to our learning. Her message is powerful, authentic, and transformational.

## FACE TO FACE ENGAGEMENT WITHIN THE MATERNITY SECTOR

Multidisciplinary maternity and gynaecology education sessions relating to practice usually occur monthly. In 2020 some of these session were affected by the COVID-19 alert level changes.

During 2020, some of the topics covered included;

- Accident Compensation Corporation (ACC) and eligibility changes to treatment injury legislation and definitions
- Caesarean Section scar defects
- Personal Protective Equipment update
- Empathy and hope
- Family harm training
- Optimising birth progress
- How to provide gender-affirming care for trans and non-binary patients
- Maternal mental health
- Mindfulness-based coping skills
- Enhanced recovery after surgery (Caesarean Section)
- Preterm pre-labour rupture of membranes

# MATERNAL MENTAL HEALTH

The availability of primary mental health services are key to ensuring maternal and baby wellbeing. Evidence regarding the positive impact on outcomes for children and families of good mental health during the perinatal period is substantial, and is strongly supported by research on attachment, and prevention of conduct disorders and neurodevelopmental impacts on children. There is also evidence linking poor mental health and wellbeing during the perinatal period with suicide and self-harm risk, family violence and an increased demand for the need for specialist mental health services.

The CCDHB specialist maternal mental health service (SMMHS) is for women who are pregnant or have a baby under one year of age (at the time of referral), who are experiencing moderate to severe mental health issues.

The team is able to offer a number of services, including:

- specialist assessments
- treatment and planning
- individualised support and therapy
- medication reviews and advice
- mental health information
- information about community support services.

The team also provides advice to health professionals regarding medication for women who have pre-existing moderate to severe mental health problems who are considering becoming pregnant, and those who are pregnant or breastfeeding.

SMMHS cover Wellington, Porirua, Kāpiti and the Hutt Valley. In the Wairarapa, a member of their team works alongside GPs as well as the adult community mental health team, to advise other health professionals who are caring for pregnant women or new mothers, who are experiencing mental illness.

## REFERRALS

Referrals can be made by GPs, midwives/LMCs, or other health professionals. Women cannot self-refer. The referral criteria includes;

> Women who are pregnant or postpartum (infant up to 12 months at the time of referral) who are experiencing a moderate to severe mood disorder/mental illness (new onset, or previous history re-triggered in perinatal period) in the wider Wellington, Kāpiti and Hutt Valley regions for assessment and intervention/ treatment, and consult-liaison; and for consult-liaison and assessment in Wairarapa DHB.

For Māori or Pacific women living in the CCDHB catchment, referral to Te Whare Marie or Health Pasifika is available. SMMHS are available to consult or jointly assess as required. Following assessment with the cultural team, a decision can be made with the woman about which team is most appropriate for her.

Referrals are triaged by Te Haika, a mental health and addictions contact centre for people in crisis, or who are experiencing moderate to severe mental health or addiction problems. The mental health, addictions and intellectual disability service (MHAIDS) are unable to report on the number of maternal mental health referrals that Te Haika triage that are not able to be followed up on, or do not meet the referral criteria, as currently rates/ numbers are not separated out from the whole of MHAIDS referrals.

In 2020 there were 250 referrals made to the SMMHS. CCDHB resident women made up only 57.2% (143) of the referrals. For women resident in CCDHB, there were 129 referrals to SMMHS and 14 requests for maternal mental health consultation. The majority of these referrals and requests came from GPs (55%) followed by midwives (12%), and MHAIDS Crisis Resolution Service (10%).

The SMMHS closed a total of 291 referrals in 2020. CCDHB resident women made up 52.6% (153) of these referrals, and the majority were closed due to treatment being completed (69.3%). 7.2% of referrals were declined treatment by the SMMHS and 23.5% were not seen due to the woman declining treatment (7.2%), or because they were lost to the service for various reasons including but not limited to, being uncontactable, or not attending appointments (16.3%).

## INPATIENT SERVICES

CCDHB does not have a specific maternal mental health inpatient ward. Women who present with severe mental health symptoms can be assessed and considered for admission to Te Whare o Matairangi, an inpatient facility at WRH. SMMHS fully support and promote the principle that a baby should remain with their mother, and arrangements that assist this should be considered while maintaining safety and initiating treatment for the woman.

There is no provision for a baby to stay with a mother who is admitted at Te Whare o Matairangi. Rather, usual practice is for the baby to remain in the care of whānau, who are encouraged to visit often with the baby. Negotiations as part of the ward admission include how often baby can visit, and to identify an appropriate space or room on the inpatient unit where whānau, baby, and mother can be together for an agreed period, including providing breastfeeds if appropriate. During the inpatient period women are encouraged to continue expressing if they are able, and breast pumps are accessed through the central equipment pool.

Another option that can be considered during the early days after birth, is for the mother and baby to remain on the maternity ward, with a health care assistant as 24 hour 'watch' to ensure safety, and support management of mental health for the mother.

## CHALLENGES

Challenges to the maternal mental health pathway include limited facilities within inpatient mental health wards, and a lack of funding and workable arrangements to assist mothers with babies within mental health respite facilities. Current respite facilities are unable to accommodate a baby during admission of a mother. Staff of current respite facilities also do not have identified or specific maternal mental health training.

A more appropriate treatment and recovery pathway would include support and assistance for mothers to continue their role in mothering their baby as much as able. Safety and reassurance of respite intervention could provide this, if the baby could remain with the mother within the respite facility, where staff also have the relevant and appropriate training in maternal mental health care.

## SUPPORTING PRIMARY CARE SERVICES TO MANAGE MATERNAL DEPRESSION

The clinical team provide support to primary care services in this area through a range of activities.

- A maternal wellbeing clinic is provided at WRH, and there is planning underway for the same initiative at Kenepuru Hospital in 2021. The aim of the clinic is to provide space for pregnant women to talk with a maternal mental health care provider about their mental health. Referral is through the LMC for any pregnant woman where there may be concerns for mental wellness during the antenatal period. The clinic offers consultation and assessment with the pregnant woman, and provides guidance and advice to the referrer. Also, referrals to secondary care mental health services (the SMMHS team) can be facilitated.
- Community liaison and consultation occurs with LMCs, and non-governmental organisations (NGOs) working with mothers and infants, such as Plunket, Family Start, and Little Shadow (a

counselling and support service working with women during the perinatal period who are experiencing mild to moderate mental health symptoms).

- On request, consultation and liaison is available from our SMMHS for GPs and other health professionals engaging with pregnant and postnatal women, and includes information such as advice about medications, or any presenting symptoms. Team clinicians are available on a duty roster daily.
- Regular and continuing education is provided to primary care midwives about maternal mental health concerns. Education is provided to LMCs through study days, and to Little Shadow. Education is supported and shared with Perinatal Anxiety & Depression Aotearoa (PADA) – a charity providing advocacy and awareness through training and education to primary healthcare professionals and community about perinatal mental health. Information about PADA can be accessed at pada.nz/.
- Facilitation of an infant mental health interest group for health professionals, with monthly meetings and education sessions.

## SCREENING FOR MENTAL WELLNESS DURING PREGNANCY AND POSTPARTUM

The SMMHS support mental wellness being considered as part of pregnancy care. SMMHS also offer education sessions and consultation for any primary care health professional who has any concerns for mental wellness of a pregnant or postnatal women, through the clinician duty service.

## MIDWIFE EDUCATION

Regular education days about mental wellness (screening and assessment) are provided by the WHS. SMMHS participates in, and contributes to this education.

## SUPPORTING HEALTHCARE PROVIDERS DURING AND AFTER COMPLEX CASES

There are a range of support services available to healthcare providers who are looking after women with complex maternal mental health issues and/or suicide cases.

- Little Shadow provides counselling services to midwives.
- CCDHB postvention (activities which reduce risk and promote healing after a suicide death) service, provide a review and support following a suicide.
- CCDHB critical incident debriefing is available on request to CCDHB staff.

The SMMHS provides direct client-based services and consult-liaison for specific clients, alongside education to other health and community professionals working with women during the perinatal period.

## FUTURE PLANNING

CCDHB has recognised that there is opportunity to enhance the availability of primary and community based services for women who experience mild to moderate levels of mental distress in the perinatal period (pregnancy to 12 months postpartum), which impacts on the wellbeing of both the mother and baby. While SMMHS provide interventions for women experiencing moderate to severe mental health symptoms, women with mild to moderate symptoms are advised to engage with a community-based NGO provider.

In 2020, 'Access and Choice' a new primary mental health initiative significantly increased the availability of free mental health support to women and families in primary care. In addition, CCDHB commenced planning to further enhance the network of support and services for women who experience mild to moderate distress related to their pregnancy. This work will translate to new services in 2021.

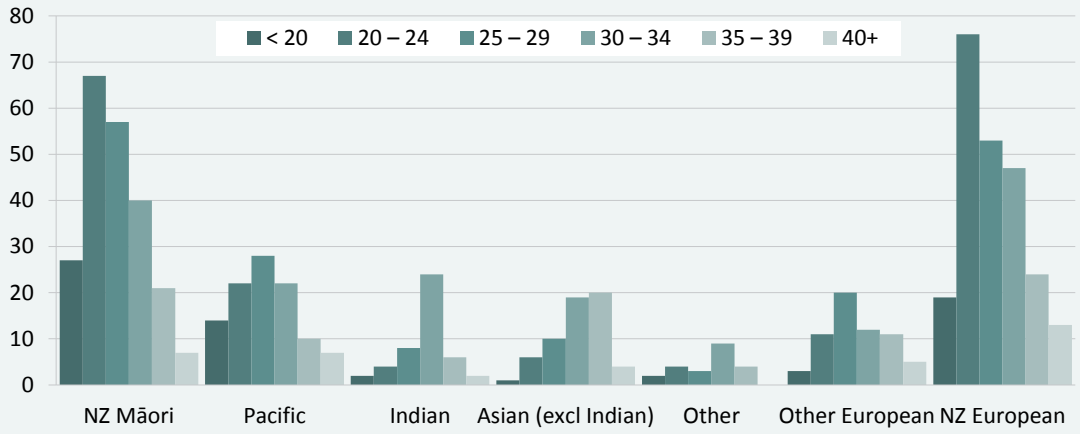
# EQUITABLE ACCESS TO CONTRACEPTION

The need for equitable access to contraception was recognised and has been widened with funding gained for free contraception consultations. This service is available to all women aged 15-44 years through their GP, provided the women live in a quintile five area, or hold a community services card. Women are also able to access free insertion and removal of long acting removable contraceptive (LARC) devices such as Mirena, Jaydess, and Jadelle from their GP.

In 2019 the discharge summary for women who had had input from secondary care was altered to include a compulsory section around contraception being offered and updating the GP and LMC of this discussion. Women under LMC care (Primary) are usually offered contraceptive advice by their LMC postnatally in the community, as the LMC has the best relationship with these women.

In 2020 there were 744 instances of women having a contraceptive device inserted during an inpatient admission, through Te Mahoe (Termination of Pregnancy and Counselling Service) or Maternity specialty services.

*Figure 2:* **Age and ethnicity of women receiving LARC 2020**




The data shows that NZ Māori (69%), Pacific (62%) and European (62%) women were more likely to have a LARC inserted at less than 30 years old, while Asian (71%) and Other Ethnicity (59%) women were more likely to be 30 years or older .

# PRETERM BIRTH

The PMMRC 12th Annual report noted live born babies from 23 to 26 weeks gestation had significant differences in survival between tertiary units in New Zealand.

There were significantly higher neonatal death rates for babies without congenital anomalies, of Māori, Pacific, and Indian mothers compared to mothers of Asian (excluding Indian), Other European, and New Zealand European ethnic groupings.

Wellington had good overall outcomes for these babies, but we undertook an audit to consider equity of care for all, and to determine whether there are barriers to optimal preparation of women prior to birth with antenatal steroids, as this has a significant impact on neonatal outcomes. A pathway for transfer was developed in the CCDHB catchment some years prior to the audit, and the success of this pathway could also be investigated.

The PMMRC recommends this pathway include:

1) Ensuring that all groups of women (irrespective of ethnicity, age, socioeconomic status, or place of residence) are offered and provided the same level of care.
2) Strategies for secondary units to manage women in threatened or early preterm labour, or who require delivery, prior to 25 weeks gestation. Including:
    a) administration of corticosteroids and magnesium sulphate (MgSO4)
    b) timely transfer from primary and secondary to tertiary units
    c) management of babies inadvertently born in their units at the lower limits of viability.

## PLANNING AND DEVELOPMENT OF THE PRETERM BIRTH AUDIT

The first step was to review current treatments and variation in practice. In 2019 a retrospective data collection tool was developed to identify the full scope of issues related to preterm birth. Using 2018 data collected from 364 women we planned to examine:

- The rates of antenatal corticosteroid administration, including whether administration was equitable by ethnicity, DHB of residence, and maternal age.
- The rates of MgSO4 administration to women for neuroprotection of babies born at <30 weeks gestation.
- Whether risk factors for preterm birth were identified during the antenatal period, and if modifiable, whether the risk factors were acted upon appropriately.
- If there were issues with transfer from secondary units that impacted on outcome.
- If there was documentation around obstetric planning regarding management of birth/baby.
- If there was documentation around neonatal planning regarding management of baby.
- If there was documentation regarding maternal wishes around birth.

Detailed data collection was undertaken and completed for 170 of the 364 cases. As those cases analysed were considered to be a large enough sample size, representing a diverse range of women, data collection ceased.

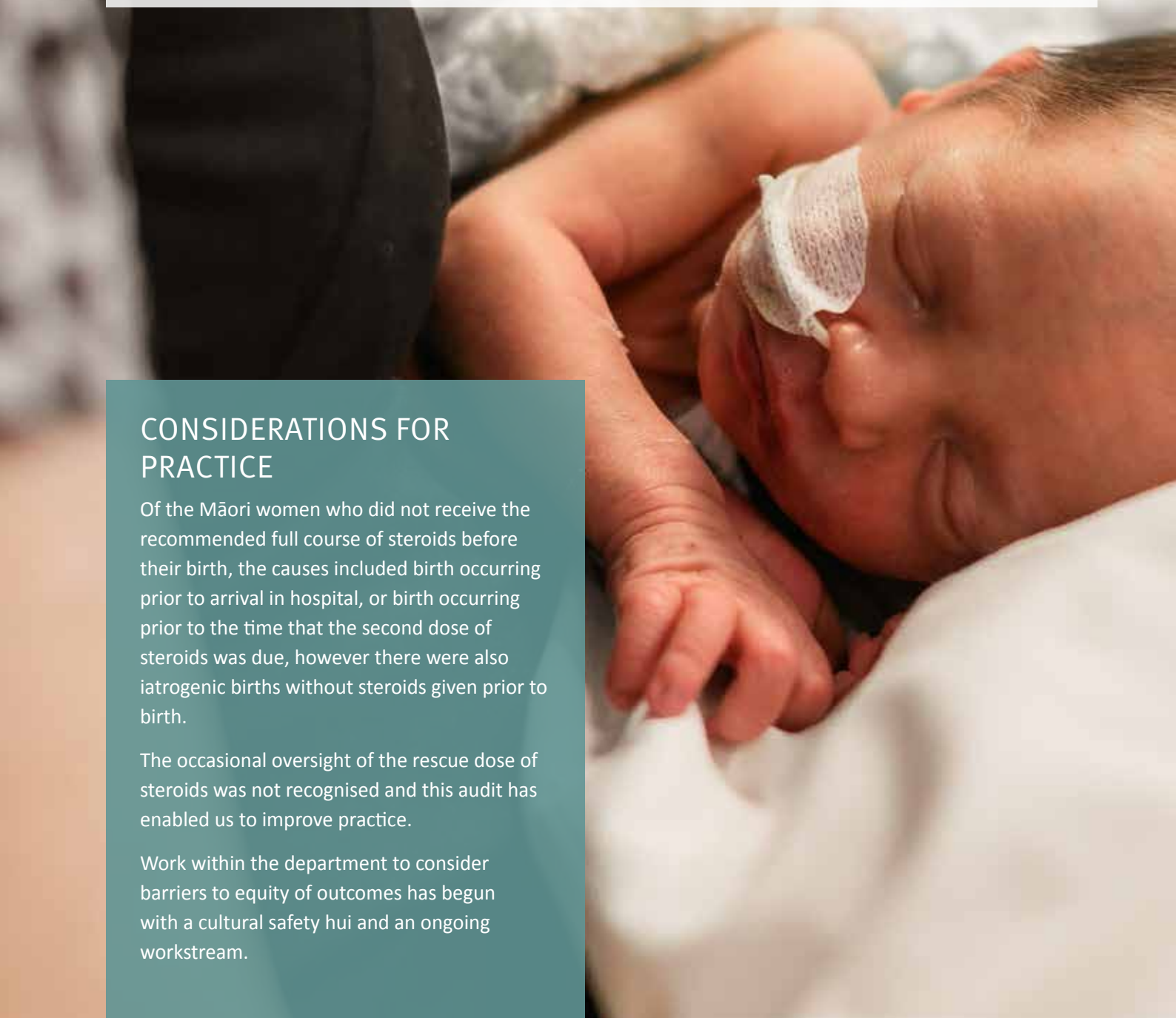
We then commissioned an epidemiologist to analyse the data and feedback any identified vulnerable population groups, variation in access to corticosteroids prior to birth, and inconsistencies in care pathways.

## RESULTS OF THE AUDIT

This audit was able to show that:

1. Steroids were administered in almost all cases where it was feasible at first presentation to hospital
2. If there was a delay between the administration of steroids and the birth of some weeks, then repeat (rescue) steroid doses were sometimes not given when indicated
3. All mothers with liveborn babies born at less than 25 weeks gestation, received optimal steroids. While mothers with babies born at <30 weeks gestation generally received optimal steroids, optimal dosing reduced with increasing gestation. This may reflect uncertainty in the use of rescue steroids at these later gestations
4. Magnesium sulphate was administered to almost 100% of babies eligible although adherence to dosing regimens was not audited
5. Māori mothers were less likely to receive optimal steroids compared to European mothers.
6. Documentation of discussions with mothers and whānau by obstetric and neonatal teams for periviable pregnancies (≤25 weeks gestation) occurred in nearly all cases

The audit was unable to show whether there was equity of access to optimizing treatments and transfer for women birthing outside Wellington Regional Hospital as limited denominator data were available.



## CONSIDERATIONS FOR PRACTICE

Of the Māori women who did not receive the recommended full course of steroids before their birth, the causes included birth occurring prior to arrival in hospital, or birth occurring prior to the time that the second dose of steroids was due, however there were also iatrogenic births without steroids given prior to birth.

The occasional oversight of the rescue dose of steroids was not recognised and this audit has enabled us to improve practice.

Work within the department to consider barriers to equity of outcomes has begun with a cultural safety hui and an ongoing workstream.

## PRETERM BIRTH AT CCDHB

In 2020, 361 women (10.8%) had a preterm birth at CCDHB. The preterm birth rate for CCDHB domiciled women was 8.0%, and 31.1% for women from other DHBs (interdistrict transfers).

Most preterm births occurred between 34 to 36 weeks gestation (5.8% of all births).

The highest overall rates of preterm births were in Indian women (13.6%- unchanged from 2019), followed by Māori women (13.5%- a decrease from 17.2% in 2019). The highest preterm birth rate for CCDHB domiciled women was for Indian women at 11.4%. Looking at preterm birth rates of CCDHB domiciled women over the last five years, Indian and Māori ethnicities have the highest rates with 9.1% and 8.9% respectively.

The age group with the highest preterm birth rate was the 40 years and older group, with 14.4% of their births being preterm. This rate dropped down to 12.1% when restricted to CCDHB domiciled women.

Looking at combined data from the last five years of CCDHB domiciled births, the groups with the highest rates of preterm birth are the under 20 years group (9.7%) and the 40+ years group (9.4%).

Women who had preterm births were more likely to report cigarette smoking at booking (16.5%) than women who had term births (9.8%).

*Table 1:* **Preterm birth rate for CCDHB domiciled women combined 2016-2020, by ethnicity group**

| | <32 weeks | | 32 - 36 weeks | | All preterm births | |
|---|---|---|---|---|---|---|
| **Ethnicity** | | **%** | | **%** | **% of total births of ethnicity** | |
| Māori | 45 | **2.1** | 144 | **6.8** | 189 | **8.9** |
| Pacific Peoples | 23 | 1.6 | 93 | 6.3 | 116 | 7.8 |
| Indian | 28 | **2.8** | 65 | **6.4** | 93 | **9.1** |
| Asian (excl Indian) | 22 | 1.2 | 121 | 6.3 | 143 | 7.5 |
| Other | 11 | 1.7 | 30 | 4.7 | 41 | 6.4 |
| Other European | 22 | 1.1 | 113 | 5.6 | 135 | 6.6 |
| NZ European | 70 | 1.1 | 326 | 5.2 | 396 | 6.3 |
| **Total** | **221** | | **892** | | **1113** | **7.2** |

*Table 2:* **Preterm birth rate for CCDHB domiciled women combined 2016-2020, by age group**

| | <32 weeks | | 32 - 36 weeks | | All preterm births | |
|---|---|---|---|---|---|---|
| **Ethnicity** | | **%** | | **%** | **% of total births in age group** | |
| <20 | 8 | **2.4** | 24 | **7.3** | 32 | **9.7** |
| 20-24 | 28 | 1.9 | 66 | 4.5 | 94 | 6.4 |
| 25-29 | 45 | 1.3 | 211 | 6.1 | 256 | 7.4 |
| 30-34 | 63 | 1.1 | 298 | 5.3 | 361 | 6.4 |
| 35-39 | 57 | 1.5 | 226 | 6.1 | 283 | 7.6 |
| 40+ | 20 | **2.2** | 67 | **7.2** | 87 | **9.4** |
| **Total** | **221** | | **892** | | **1113** | **7.2** |

## DISCHARGE PLANNING AFTER PRETERM BIRTH:

In 2019 the discharge summary template for women who had received care by secondary services was altered to prompt advice regarding preterm birth. This ensures education of the women and her care providers receiving the discharge summary, including what to do in preparation for a future pregnancy.

**WHEN YOU HAVE HAD A BIRTH PRIOR TO 37 WEEKS IT IS CALLED PRETERM (PREMATURE) BIRTH. WHEN PRETERM BIRTH HAS HAPPENED WE KNOW THERE IS A HIGHER CHANCE IT COULD HAPPEN AGAIN.**

**In the future we want to prevent/predict preterm birth where possible by doing things to optimise a future pregnancy. Also we want to ensure the best outcome if another preterm baby did happen in the future by being prepared.**

**Also we want to have the best outcome for any future preterm births by ensuring you know when to come to Hospital.**

- Live smoke free
- Optimise your health / diet before a future pregnancy
- When pregnant
  - Book in the first 10 weeks with an lead maternity carer (LMC)
  - Be screened for infections e.g. urine and vaginal
  - Referral to hospital doctors early in a future pregnancy will help to plan care to check cervix length and improve supports to the cervix and placenta. This needs to be done before 16 weeks to be helpful.
  - Talk with your LMC about what to watch out for in pregnancy. If you do labour early in the future it is important that you know when to come to hospital. This will give your baby the best start possible.

There is a new pamphlet which has been produced by the greater Wellington region.

The pamphlet is given to women who have had their waters break prematurely, or who went into labour prematurely. The brochure gives recommendations planning the next pregnancy, before the next pregnancy, and during the next pregnancy. The brochure also covers signs to watch out for in the next pregnancy and advises to call a midwife or local hospital if any of the signs are present.

Special thanks to Counties Manukau, Auckland, and Northland DHBs for allowing us to use the original brochure.

# Reducing your chance of having a premature baby with your next pregnancy

Capital & Coast District Health Board
ŌPOKO KI TE URU HAUORA

PATIENT INFORMATION

Maternity

## Kia ora

This information is important if you went into labour or your waters broke before 37 weeks. As you have had one premature baby, there is a chance that this can happen again with your next pregnancy.

However, there are some things that you can do that may reduce the possibility of having another premature baby. You may feel anxious about having another baby early. Talk to your doctor or midwife for support and advice.

## Planning for your next pregnancy

It's best to plan your next pregnancy, so that you have a gap of at least 12 months. Talk to your health professional about your choices for contraception.

## Before your next pregnancy

- Start taking folic acid and iodine
- Become smoke free. Smoking in pregnancy doubles your chance of preterm birth. Your midwife or family doctor will refer you for support, and you can visit: www.smokefree.org.nz
- Aim for a healthy weight. Visit www.health.govt.nz/your-health/pregnancy-and-kids/pregnancy for more information
- See your doctor for any health conditions you may have (such as diabetes and high blood pressure), so these are well controlled

- If you are considering fertility treatment, talk to your fertility doctors about avoiding a twin pregnancy
- Avoid all alcohol and recreational drug use including marijuana
- Sexually transmitted infections can increase the chance of preterm birth. A check up with your doctor before your next pregnancy is a good idea.

## During your next pregnancy

- Book in with a midwife or see your family doctor early ideally by ten weeks
- Having a midwife lead your pregnancy care is known to reduce the risk of preterm birth
- Your midwife will arrange a urine test and vaginal swabs to check for infection
- Your midwife will recommend that you see an obstetrician who will discuss your chances of having another preterm birth and make a plan for your pregnancy

**This plan may include:**

- A vaginal examination to check your cervix
- Extra ultrasound scans of your cervix in the first half of your pregnancy
- A small number of women may be recommended to have a stitch (cervical cerclage) placed around their cervix or to take progesterone medication to help reduce the chance of another early birth.

# MQSP PROGRESS REPORT 2020

*Detailed information about the projects in the following table can be found in the chapter: 'He whakatutuki kia kairangi - Steps towards excellence'.*

## PROJECT STATUS

- Work has been completed and/or in business as usual phase
- Work is in progress/underway and nearing completion
- There is still a significant amount to achieve before completion

| *Table 3:* **MQSP project progress report 2020*** | **Status** |
|---|---|
| **Optimising birth initiative** | |
| **Reporting of caesarean sections via Robson 10 classification** | |
| **Enhanced recovery after surgery care pathway** | |
| **Evaluation of a tailored approach to Antenatal Education Services** | |
| **Māori and Pasifika Midwifery Team** | |
| **Elevation of engagement and equitable change initiatives** | |
| **Preterm birth audit** | |
| **Maternity Clinical Indicators Qlik App** | |
| **Implementation of the Newborn Early Warning Score chart** | |
| **Hospital-wide implementation of maternity vital signs charts** | |
| **GAP Baseline audit for suspicion and detection of SGA in GAP DHBs** | |
| **Neonatal hypoglycaemia policy** | |
| **Pre-labour Pre-term Rupture of Membranes Policy** | |
| **Fetal Fibronectin** | |
| **Establish a clinical pathway for women with identified placental implantation abnormalities** | |
| **Quarterly statistics sheet** | |
| **Positive birthing images and signage** | |

* as at 31 December 2020


# He whakatutuki kia kairangi

# Steps towards excellence

# OPTIMISING BIRTH INITIATIVE

The WHS would like to progress their vision of excellence by exploring and endeavouring to optimise the birth experience for women who are cared for in the region.

The mode of birth in a woman's first birth impacts significantly on future birth experiences. If a woman has a scar on her uterus from a caesarean section in her first birth then this lowers the likelihood of a vaginal birth in subsequent births. Multiple caesarean sections can lead to more complex pregnancies and increased morbidity for the mother and baby. As a service we have work to do to ensure women are getting optimal support to birth without intervention where appropriate and also well-coordinated intervention when required.

In 2019 we introduced the Robson 10 Classification to enable a robust audit cycle enabling us to examine where best to focus resources, and provide a measure of progress. The audit showed us our nulliparous women were overrepresented in caesarean section rates and so this became a focused arm of the optimising birth project. The other focus was on streamlining the process of women having elective caesarean sections.

A project manager was appointed in 2020 who developed a strategy to introduce misoprostol to induce labour efficiently. Other DHBs around New Zealand had already successfully integrated misoprostol into practice, so we were able to adapt their guidelines, ensuring multidisciplinary involvement in the planning phase. Alongside misoprostol induction changes we developed an enhanced recovery after surgery (ERAS) pathway for those having elective caesarean sections (see section 'Enhanced recovery after surgery care pathway').

## NEXT STEPS

Our plan for 2021 is to bring misoprostol into practice, and replace dinoprostin gel which is currently used to induce women. The ultimate aim is to see a reduction in our Robson groups 1 and 2a caesarean section rates. The change in practice will require planning and teaching and will focus heavily on data collection to ensure we are seeing the expected improvements. Simultaneously, we will roll out the ERAS pathway and streamline women's experience of our service for their elective caesarean section births.

## ROBSON 10 CLASSIFICATION

The WHS has implemented a reporting system that provides monthly Robson 10 reports for the previous month's births. Some education was required regarding documentation, to ensure completeness of data, and to avoid 'unclassifiable' births. Data cleansing is carried out prior to the report being generated to ensure as few unclassifiable births as possible.

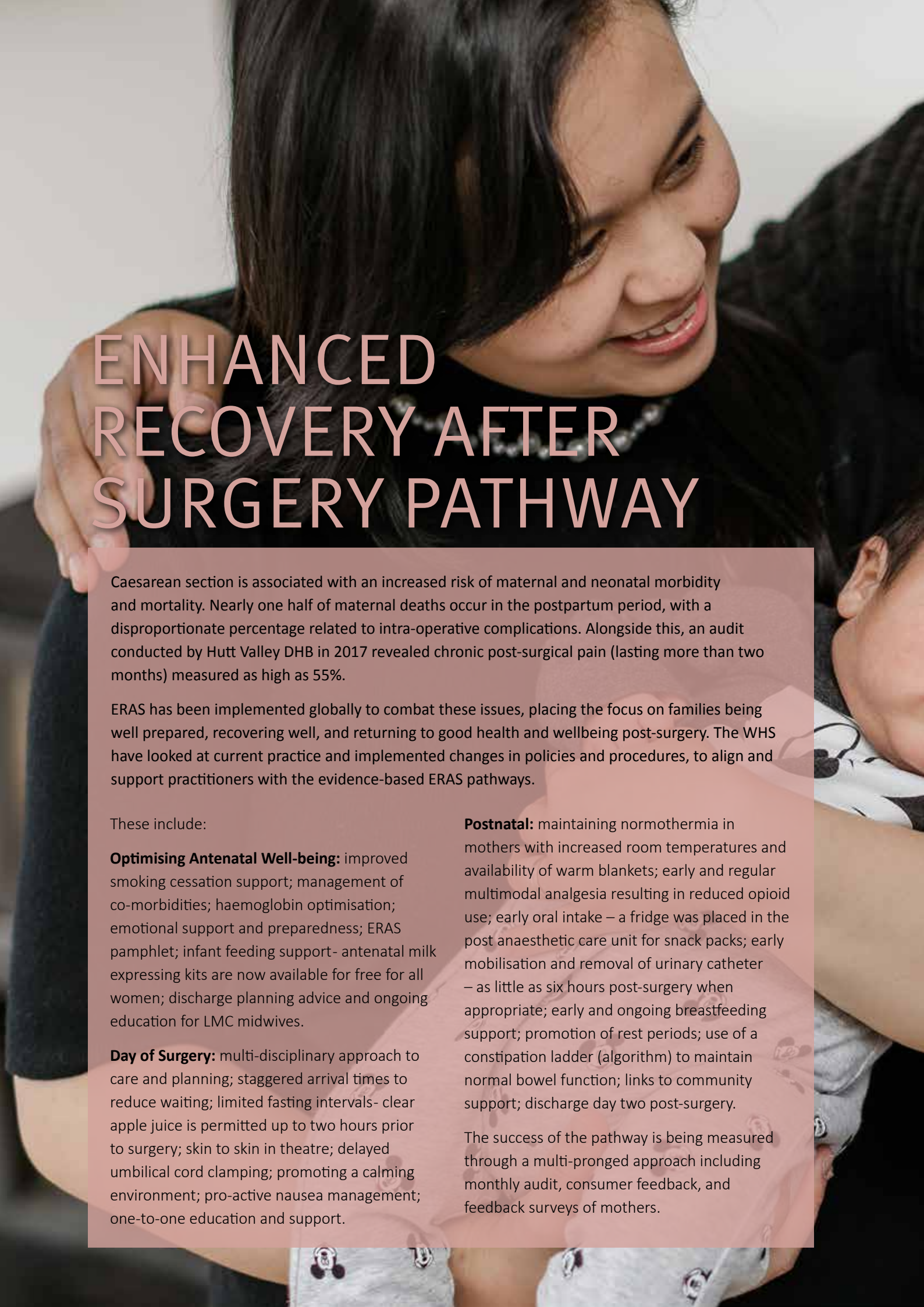
The WHS reporting system provides monthly Robson 10 reports of each birth and has continued to highlight that we have a caesarean section (CS) rate, which is significantly higher than the expected rate, as reported by the World Health Organisation. Our goal was to optimise the birth for each woman to ensure the optimal mode of birth for their specific situation.

*Table 4:* **Robson Classification 2020: CCDHB**

Ref 1. Group size (%) = n of women in the group / total N women delivered in the hospital x 100
Ref 2. Group CS rate (%) = n of CS in the group / total N of women in the group x 100
Ref 3. Absolute contribution (%) = n of CS in the group / total N of women delivered in the hospital x 100
Ref 4. Relative contribution (%) = n of CS in the group / total N of CS in the hospital x 100

| **Group** |
|---|
| **1. Nulliparous women with a single cephalic pregnancy and ≥ 37 weeks gestation in spontaneous labour** |
| 2. Nulliparous women with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced or were delivered by CS before labour |
| **2a. Labour induced** |
| 2b. CS before labour |
| 3. Multiparous women without a previous CS with a single cephalic pregnancy and ≥37 weeks gestation in spontaneous labour |
| 4. Multiparous women without a previous CS with a single cephalic pregnancy and ≥37 weeks gestation who had their labour induced or were delivered by CS before labour |
| 4a. Labour induced |
| 4b. CS before labour |
| 5. All multiparous women with at least one previous CS with a single cephalic pregnancy and ≥37 weeks gestation |
| 5a. One previous CS |
| 5b. Two or more previous CS |
| 6. All nulliparous women with a single breech pregnancy |
| 7. All multiparous women with a single breech pregnancy including women with previous CS(s) |
| 8. All women with multiple pregnancies including women with previous CS(s) |
| 9. All women with a single pregnancy with a transverse or oblique lie, including women with previous CS(s) |
| 10. All women with a single cephalic pregnancy < 37 weeks gestation, including women with previous CS(s) |
| **Total** |

| | Number of CS in group | Number of women in group | Group size - (Ref 1) | Group CS rate - (Ref 2) | Absolute group contribution to overall CS rate - (Ref 3) | Relative contribution of group to overall CS rate - (Ref 4) |
|---|---|---|---|---|---|---|
| | 169 | 840 | 25.1% | **20.1%** | 5.1% | **14.0%** |
| | 272 | 508 | 15.2% | 53.3% | 8.1% | 22.5% |
| | 199 | 436 | 13.0% | **45.6%** | 6.0% | **16.5%** |
| | 72 | 72 | 2.2% | 100% | 2.2% | 6.0% |
| | 23 | 695 | 20.8% | 3.3% | 0.7% | 1.9% |
| | 93 | 370 | 11.1% | 25.1% | 2.8% | 7.7% |
| | 30 | 307 | 9.2% | 9.8% | 0.9% | 2.5% |
| | 63 | 63 | 1.9% | 100% | 1.9% | 5.2% |
| | 332 | 432 | 12.9% | 76.8% | 9.9% | 27.5% |
| | 255 | 353 | 10.6% | 72.2% | 7.6% | 21.1% |
| | 77 | 79 | 2.4% | 97.5% | 2.3% | 6.4% |
| | 81 | 92 | 2.8% | 88.0% | 2.4% | 6.7% |
| | 62 | 70 | 2.1% | 88.6% | 1.9% | 5.1% |
| | 58 | 80 | 2.4% | 72.5% | 1.7% | 4.8% |
| | 16 | 16 | 0.5% | 100% | 0.5% | 1.3% |
| | 102 | 238 | 7.1% | 42.9% | 3.1% | 8.5% |
| | **Total number CS** | **Total number women delivered** | | | **Overall CS rate** | |
| | **1208** | **3341** | | | **36.1%** | |



# ENHANCED RECOVERY AFTER SURGERY PATHWAY

Caesarean section is associated with an increased risk of maternal and neonatal morbidity and mortality. Nearly one half of maternal deaths occur in the postpartum period, with a disproportionate percentage related to intra-operative complications. Alongside this, an audit conducted by Hutt Valley DHB in 2017 revealed chronic post-surgical pain (lasting more than two months) measured as high as 55%.

ERAS has been implemented globally to combat these issues, placing the focus on families being well prepared, recovering well, and returning to good health and wellbeing post-surgery. The WHS have looked at current practice and implemented changes in policies and procedures, to align and support practitioners with the evidence-based ERAS pathways.

These include:

**Optimising Antenatal Well-being:** improved smoking cessation support; management of co-morbidities; haemoglobin optimisation; emotional support and preparedness; ERAS pamphlet; infant feeding support- antenatal milk expressing kits are now available for free for all women; discharge planning advice and ongoing education for LMC midwives.

**Day of Surgery:** multi-disciplinary approach to care and planning; staggered arrival times to reduce waiting; limited fasting intervals- clear apple juice is permitted up to two hours prior to surgery; skin to skin in theatre; delayed umbilical cord clamping; promoting a calming environment; pro-active nausea management; one-to-one education and support.

**Postnatal:** maintaining normothermia in mothers with increased room temperatures and availability of warm blankets; early and regular multimodal analgesia resulting in reduced opioid use; early oral intake – a fridge was placed in the post anaesthetic care unit for snack packs; early mobilisation and removal of urinary catheter – as little as six hours post-surgery when appropriate; early and ongoing breastfeeding support; promotion of rest periods; use of a constipation ladder (algorithm) to maintain normal bowel function; links to community support; discharge day two post-surgery.

The success of the pathway is being measured through a multi-pronged approach including monthly audit, consumer feedback, and feedback surveys of mothers.

## NEXT STEPS

Planned work for 2021 includes:

- Introduction of patient controlled oral analgesia medication packs for distribution of analgesia for women who have undergone an elective caesarean section. This self-administered pain relief will help to increase autonomy and ensure analgesia is not missed or delayed.
- Investigation into the potential of a midwifery-led discharge process, with the intention to streamline the discharge process, leading to families being discharged home in a timely manner.
- Translation of the ERAS pamphlet into several languages increasing equitable access to care.
- Ongoing education for the post anaesthetic care unit team, medical staff, nurses and midwives.

# EVALUATION OF A TAILORED APPROACH TO ANTENATAL EDUCATION SERVICES

Antenatal care in New Zealand should be made easily accessible and free for all pregnant women. Unfortunately, this has been not always the case. Antenatal education is usually delivered through mainstream approaches, which includes formal classes with one educator providing content on what to expect during pregnancy, during labour, and how to care for their newborn baby. Often these classes have been designed and delivered by Pākehā worldviews, and women are expected to travel to the setting and sit and listen to what is being taught. These mainstream models often fail to meet the needs of all women and their families; particularly some Māori whānau, Pasifika fanau, youth, and families in some localities. Consequently, the reliance on delivering antenatal education through mainstream models has created inequities between pregnant women and their families within New Zealand.

CCDHB recognised this shortfall and made a commitment to fund a tailored antenatal education programme. The plan was to fund more targeted pro-equity approaches alongside mainstream providers. To make this transition, CCDHB contracted with Kāpiti Youth Support, Taeaomanino Trust, and Ora Toa PHO to develop and provide innovative approaches to antenatal education. These included kaupapa Māori approaches and targeting localities with the greatest inequity of maternal and child health outcomes.

Testing a new model required an evaluation to inform the transition of investment to the effective models in the longer term. CCDHB engaged Dr Kendall Stevenson; Research Fellow, The Dragon Institute of Innovation; Victoria University of Wellington to evaluate the services. This evaluation required developing trusting and meaningful relationships with each of the three providers contracted to design and deliver these prototypes, and it required relationships with the women involved in the programmes.

## OUTCOMES

Dr Stevenson reported that after evaluating the experiences of not only the providers of, but also the consumers of, the tailored antenatal education services that were delivered, it could be concluded that each programme was a success. Each group recognised the needs of and protected their women. They developed meaningful partnerships with their women, which in turn encouraged participation in antenatal education services that worked well for them. Each provider delivered a culturally appropriate antenatal education service that engaged women, and built meaningful relationships that encouraged the woman to look at her options, make her own decisions, and be able to give informed consent throughout all aspects of her pregnancy and postnatal period.

Three main themes were found, each with subthemes, as outlined in the table below.

*Table 5:* **Antenatal Education Services themes and subthemes**

| | | | |
|---|---|---|---|
| **Themes** | Relationships are key to success | Cultural alignment supports engagement of women | Future of antenatal education services |
| **Subthemes** | Centralising relationships in practice builds trust and confidence. | A whānau ora approach enabled multiple needs being addressed. | Building trust takes significant time and energy- is this sustainable? |
| | Continuing care into the postnatal period enabled an easier transition to motherhood. | Aligning culture and diversity with service facilitates engagement. | Procurement processes looking forward. |
| | Protective relationships allowed for greater engagement. | | Addressing antenatal inequities. |

## NEXT STEPS

To address the stark health inequities, we must forge innovative models and strategies, rather than reproducing (less successful) paths that have the least resistance. As Paul Whitinui claimed in 2011, "closing the gap between Māori and non-Māori will not be achieved if as a nation we continue to create health models, frameworks, programmes, initiatives and interventions that are mere reflections of mainstream health processes" (p. 142).

Dr Stevenson suggested that a long-term goal could be keeping these women who participated in the pilots engaged in the service and offering them mentoring roles for new mothers entering the antenatal care and education space. The returning mentors could then be placed through a simple facilitation-skills training module that is tailored to the clinical and cultural needs of each specific group. These supporting mothers could then also be assisted to become trained childbirth educators and/or midwives.

# MĀORI AND PASIFIKA MIDWIFERY TEAM

## PLANNING AN ALTERNATIVE MODEL OF CARE

In June 2020, three self-employed LMCs based in Porirua ceased clinical practice. These three experienced midwives had a combined caseload of 215 women of which 61 were Māori, and 91 were Pasifika. Porirua has the highest birth rate of all CCDHB localities.

The Community Midwifery Team (CMT) acts as the provider of last resort for women who are unable to find a community based LMC. While the CMT provide a good service, women under the care of the CMT must birth at WRH and they do not have the same midwife caring for them throughout the antenatal, intrapartum, and postnatal period. Relying on the CMT to pick up the midwifery care for this many Porirua based women would not ensure the best health outcomes or experience for Māori and Pacific mothers and babies.

The benefits of Māori and Pacific women receiving antenatal, intrapartum, and postnatal care through a Māori and Pacific Midwifery Continuity of Care Team are well understood. Investing in an alternative model of care could increase maternal satisfaction and increase the number of births occurring in primary birthing facilities.

A proposal for the creation of a Māori and Pasifika Midwifery Team was put forward to Strategy, Planning & Performance, and an alternative model of care was approved. In December 2020, Te Ao Marama Midwifery Tapui Limited was formed.

Te Ao Marama uses a self-employed funding model rather than a DHB employed model. The midwives are able to claim for the cost of delivering services through Section 88 of the Primary Maternity Services Notice. However Section 88 does not adequately remunerate midwives for providing care to women with increased levels of complexity as seen in Porirua. In order to incentivise and retain Māori and Pacific midwives to provide care to women with increased complexities, the DHB supports the team with additional funding.

This approach means Te Ao Marama will be able to benefit from the increases to the Primary Maternity Services Notice as changes are made, and the DHB will re-evaluate the level of investment to align with any changes to the Primary Maternity Services Notice.

The costing for this model was based on CCDHB supporting the operating costs of the midwifery team and the funding was in recognition of;

- Redressing inequities in Porirua is a strategic investment decision for the DHB, and aligns with the Health System Plan 2030, Tier 1 integration priorities, Taurite Ora and the Sub-Regional Pacific Health and Wellbeing Plan
- The well documented benefits of Māori and Pacific midwives providing care to the Māori and Pacific population and the need to attract and retain their expertise
- The additional complexity in delivering midwifery care to women living in high deprivation and/or social complexity, which is currently not adequately remunerated through the Primary Maternity Services Notice.

In addition to delivering midwifery care, Te Ao Marama will;

- Deliver health promotion to Māori and Pacific women and their babies
- Provide mentoring for Māori and Pacific undergraduate and new graduate midwives

- Maintain at least five full time equivalent Māori and Pacific midwives within the team and ensure that at least 80% of their caseload are Māori or Pacific babies
- Report to the DHB on the outcomes of the care they are providing to Māori and Pacific women and babies
- Work with the DHB to evaluate the impact of this model for Māori and Pacific women and babies.

## NEXT STEPS

- Signing of contracts between the LMCs and CCDHB
- Securing premises
- Advertising Te Ao Marama as a service
- Case loading of women to begin
- Resignation from current roles within the DHB for some.

# ELEVATION OF ENGAGEMENT AND EQUITABLE CHANGE INITIATIVES

2020 was a year in which we significantly changed the focus of previous MQSP activities. We initiated many new projects;

## CREATION OF A MĀORI AND PASIFIKA LEADERSHIP MIDWIVES AND NURSES GROUP

CCDHB created a leadership group specifically for Māori and Pasifika nurses and midwives. It is intended as a space to be amongst your peers who are DHB employed or community facing, and be supported to share ideas and knowledge. The group enables members to discuss initiatives, work plans or concerns, and use the space to connect with each other, strengthening and improving their relationships and the environments they work in.

## INTRODUCTION OF BIODEGRADABLE WHENUA (PLACENTA) BAGS

There was a safety and sustainability opportunity, for whānau who choose to take home their whenua to bury. Previously, in order to bury the whenua, whānau had to first remove the whenua from the hospital grade plastic bag, potentially exposing themselves to blood and body fluids. Whānau were then left with a non-biodegradable plastic bag to dispose of.

The WHS introduced biodegradable corn starch bags and compostable boxes for storing and transporting whenua home. This initiative allows whānau to safely have the whenua remain in the corn starch bags inside the box, to then be buried.

By eliminating the need to handle the whenua, we have reduced the health risk to whānau, ensured the process is culturally safe and appropriate, and reduced our environmental impact. CCDHB is committed to using sustainable products and being environmentally conscious where we can.

## THE POWER TO PROTECT

Through collaboration with the Violence Intervention Programme (VIP), the MOH Power to Protect (P2P) Programme, and Wairarapa DHB Maternity and VIP (with thanks for sharing their initiative), the WHS was able to provide a free bodysuit with powerful message to all babies born. The bodysuit has an image on the front with the simple message 'FRAGILE, Handle with care'.

The MQSP funded project aimed to encourage more conversations with women and whānau around keeping babies safe in 2020.

The P2P Programme aims to educate parents of all newborns on how to cope with a crying baby and the dangers of shaking a baby. The bodysuits come with a brochure that provides resources for caregivers to access if they need assistance, guidance, or help.

## ACTIVE PROMOTION OF SAFE SLEEP DEVICES

The DHB has a well-established safe sleep programme, part of the MOH National SUDI (sudden unexplained death in infancy) Prevention Programme. In 2020 a newly appointed Maternal Health Coordinator helped to promote the programme, ensuring woman and whānau were able to make every sleep a safe sleep. Wahakura are made by kairaranga (traditional weavers) or by whānau who are guided through this process.

The WHS were very grateful to Hapai Te Hauora, who funded a wahakura wānanga. This was a fantastic initiative, allowing pregnant women and whānau to make their own wahakura. The wahakura wānanga was an excellent interactive way to engage our hapū wāhine (pregnant women) and further educate around safe sleeping.

In 2020 the WHS distributed 260 wahakura to whānau in need. This was just shy of the annual target set by the MOH of 279, and was a considerable increase (381%) from 2019 which saw 58 wahakura distributed.


## IMPROVING FEEDBACK MECHANISMS - MATERNITY FEEDBACK AFTER BIRTH SURVEY

The WHS acknowledges the importance of obtaining consumer feedback in order to improve our maternity services, and the need to specifically target populations that experience inequity in health. There was a maternity consumer survey in place but it wasn't targeting the communities with the highest need, and we were therefore unable to improve our service to benefit these groups.

It was thought that some consumers weren't feeding back during their admission on the devices made available, but would perhaps feedback at a later time, given the chance. There needed to be a mechanism to facilitate this.

In collaboration with the Māori Health Directorate and being guided by Taurite Ora, the survey questions were redesigned, and a new card was created, to be placed in the Well Child book to be accessed at any time that was convenient to the consumer.

The focus of the feedback survey was redirected towards our Māori and Pacific whānau who are consistently over-represented in poor health outcomes in our maternity statistics. Questions concentrated on the experience of Māori and Pacific people and their cultural needs and safety, and were also translated into Te Reo.

The feedback survey card was redesigned with an updated image on the front and a QR code on the back. The feedback is reviewed monthly in the MQSP meeting, and decisions are made by the group to action or escalate responses to the feedback as required.

We now have a survey that is easy to access and is relevant to our target audience. Despite this, there has been continued poor uptake in survey participation, therefore there is more work to be done in this space. We acknowledge the national pandemic in 2020 could have contributed to poorer responses. The focus continues to be on how to increase the feedback response rate from the target population. New strategies are being discussed and will be incorporated into the work plan for 2021.

## A GESTURE DURING LOCKDOWN

When COVID-19 sent us into our first ever national lock down Level 4, we identified there was an added stress to women expecting babies. We asked community based midwives to forward us the name of someone in their care that would benefit from a Countdown Gift Card, a small offering but something to help in any way we could. We were able to help 100 whānau during lockdown, with a $50 gift card.

# MATERNITY CLINICAL INDICATORS QLIK APP

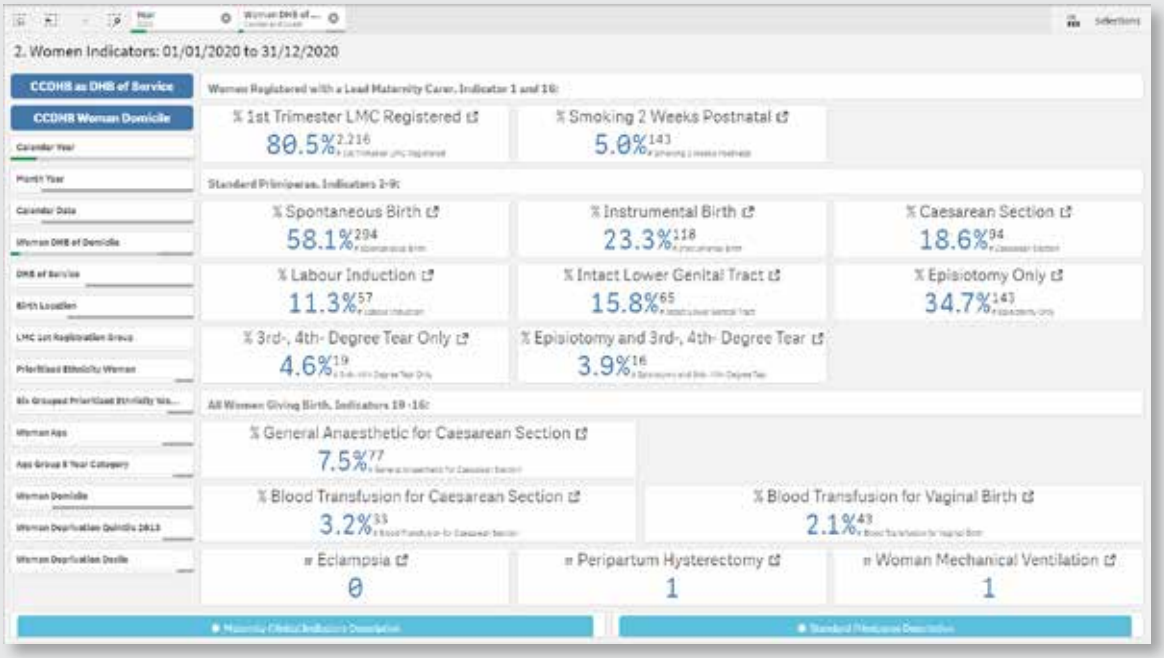
A plan was made to develop a maternity key performance indicator (KPI) dashboard as part of the optimising term birth work. The aim was to create a dashboard inclusive of clinical indicators that was visible to all providers of maternity care, which would allow for analysis of data in close to real time, rather than having to use retrospective data provided by the MOH. The application includes ethnicity data so the service is able to target areas of need.

A specialist group was assembled and provided feedback to the application designer over the course of several months.

The application provides information on health outcomes for women and their babies by DHB of Service and DHB of Domicile. The application reflects the New Zealand Maternal Clinical Indicators report series of the MOH which can be found here: https://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/new-zealand-maternity-clinical-indicators-series.

Data presented is sourced from the National Maternity Collection (MAT) dataset that is provided by the MOH. Data is limited to the CCDHB subset of MAT records filtered by CCDHB. MAT integrates maternity-related data from the National Minimum Dataset (NMDS) and LMC claim forms. It provides statistical, demographic and clinical information about selected publicly-funded maternity services up to nine months before and 3 months after a birth. Also, for each pregnancy and live-born baby recorded on MAT additional hospital event data was extracted from the NMDS. The data starts from July 2015 and the application shows data to the end of the month two months prior to the current month.

Every CCDHB Qlik application has a confidence rating. This lets users know the level of confidence they can have in the application's data. The Maternity Clinical Indicators (MOH) Qlik application has received a five star (excellent) confidence rating, indicating that data quality is high and the data is well governed. The application meets all standards and most or all confidence score criteria and can be trusted for decision making and analysis.



# IMPLEMENTATION OF THE NEWBORN EARLY WARNING SCORE CHART

The Newborn Observation Chart/Newborn Early Warning Score (NOC/NEWS) chart was implemented nationally in New Zealand in 2020.

The Neonatal Encephalopathy (NE) taskforce was set up to look at ways of reducing harm from NE. In New Zealand, earning warning systems are tools that are used as part of standard practice across hospitals. The goal of the NOC/NEWS chart is to have a standardised early warning observation system for newborns, especially those with risk factors, such as; sepsis, meconium aspiration, and fetal distress at birth. The chart is used for monitoring and recording vital signs and assessments, leading to greater recognition and response to a declining newborn.

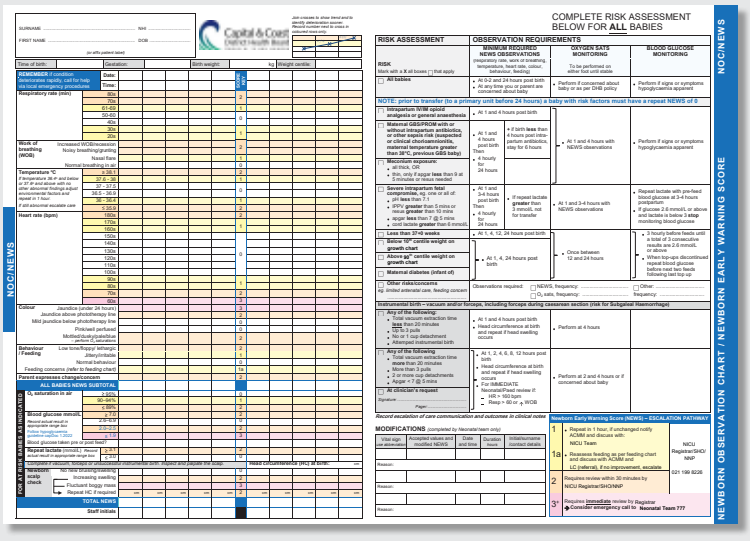
Approximately, 55-66% of all NE cases are potentially avoidable, resulting in unnecessary admissions to NICU and the cost associated with this to whānau and the health budget. The majority of newborns are identified as having NE by requiring resuscitation at the time of the birth, but less severely affected newborns may not be recognised and may miss out on timely treatment that would have significantly improved their later neurological function.

The NOC/NEWS chart provides a single place to record observations of a baby's status, and is a communication and prompting tool that identifies the deteriorating newborn in the early stages, thus prompting timely management.

Following evaluation of Canterbury DHB's NOC/NEWS pilot scheme, assessing the effectiveness of the tool, CCDHB initiated education in October 2020. These comprised of one hour face-to-face education sessions at Wellington, Kenepuru, and Paraparaumu Maternity Units, and Wellington NICU. The tool was implemented at CCDHB in November 2020. In addition, one-on-one individual teaching sessions were conducted, and a presentation was shown at the New Zealand College of Midwives – Wellington Regional meeting to inform LMCs before the tool was employed. New staff members are educated on the practicalities of using this tool during their orientation.

Feedback from staff has been that the NOC/NEWS chart is an easy visual tool to use in daily practice. Using the chart has reduced the amount of paperwork previously generated. The chart is clear, and it facilitates swift identification of issues for the newborn.

Auditing use of the NOC/NEWS chart is continuing and results show good uptake. The NOC/NEWS tool is now embedded in practice.



# HOSPITAL-WIDE IMPLEMENTATION OF MATERNITY VITAL SIGNS CHARTS

Maternity vital signs charts (MVSC) were introduced to CCDHB in two phases. Initially to all maternity areas using the previous version of Maternity Vital Signs Charts, and phase two was to introduce the charts hospital-wide. MVSC were embedded in use in Maternity areas and ongoing audits completed.

In late 2020 preparations for the introduction hospital-wide were completed using a targeted communication strategy to ensure all staff in non-maternity specific areas understood the clinical importance of using a MVSC for all women who were pregnant or recently pregnant (within 42 days), instead of using the well accepted Adult Vital Signs Chart.

Online education was added to education dashboards for all midwives and nurses. This online education is available to doctors also. Educational support was geared to appreciating the rationale for the use of this specific Maternity chart. Process auditing of chart use in maternity areas was undertaken using a Health Quality and Safety Commission (HQSC) tool.

Emergency call numbers were monitored for escalation or reduction, but small numbers made this a measure of limited value. For hospital-wide auditing the same HQSC questions were applied on a case by case basis. The most important question to answer was if the correct chart was being used for pregnant or recently pregnant women.

Auditing showed good compliance with using the MVSC correctly. The scoring of the Maternity Early Warning System (MEWS) included in the MVSC has been good. Escalation has occurred when necessary and MEWS scores documented. Modifications are rarely applied and this may be an area for ongoing education and improvement. There have been no significant increases or decreases in emergency calls. This may reflect appropriate early detection of deterioration, alongside a greater willingness to escalate to emergency calls as required, so more appropriate use of emergency calls.

## NEXT STEPS

MVSC will be fully in place across the CCDHB at the beginning of 2021. Monthly auditing is ongoing for the charts in Maternity settings. Random auditing of the charts will be undertaken when pregnant or recently pregnant women are identified in other areas of the hospital.

Mobile Electronic Patient Observations systems may be introduced in the future. This will require additional work to ensure these function well, but will improve the quality of auditing.

# GAP BASELINE AUDIT, FOR SUSPICION AND DETECTION OF SGA IN GAP DHBS

Detecting poor fetal growth early on may reduce the risk of stillbirth by presenting the opportunity for better surveillance and iatrogenic preterm birth (MOH, 2020). The ACC and the Perinatal Institute are working together to try and reduce rates of small for gestational age (SGA) births. The Perinatal Institute has developed the Growth Assessment Protocol (GAP), part of which is the GROW software used to create customised weight centile charts, therefore detecting SGA babies.

In June 2020, CCDHB signed a contract with the Perinatal Institute appointing Fiona Johnston (Community Midwifery Team Midwife) to the position of GAP Champion. The objective of the champion role is to provide a greater awareness and training around GAP/GROW, as well as providing quarterly reports and investigating missed cases (where an SGA baby was undiagnosed prior to birth).

Detailed initial GAP/GROW mandatory training is carried out by the Perinatal Institute via Zoom©. The training was completed by nine CCDHB midwives and seven LMC midwives in 2020. GAP/GROW reminder training is carried out at Midwifery core study days but unfortunately these were cancelled in 2020 due to COVID-19. There is also e-learning training provided by the Perinatal Institute on Connect Me, available to all midwives, nurses, sonographers, and doctors involved in maternity care. The course is three hours long and covers;

- Fetal growth restriction and pregnancy outcomes
- Customised charts: principles, and clinical implications
- Risk assessment and surveillance: guidelines, algorithms
- Fundal height: standardised measurement and plotting
- Referral protocols: indications for further investigation
- Clinical and practical application: case studies.

Each DHB participating in GAP agreed to complete a baseline audit to identify the rate of suspected and detected SGA prior to the implementation of the programme. This is so a pre and post comparative analysis can be completed to enable DHBs to evaluate the effectiveness of implementing the programme. In order to obtain valid results, 500 births for the period of January – June 2017 were required. 500 births were necessary to give sufficient power, as detection rates of SGA are small numbers (that is, detection rates are a subgroup of the SGA babies which are usually around 10% of the population).

Data required for the baseline audit included maternal ethnicity, parity, height and weight at booking, baby's gestation at birth, sex, and birthweight. The data was entered into a bulk birthweight centile calculator in the form of an excel spreadsheet. Of the 500 births entered into the calculator, 62 (12.4%) were identified as being less than the tenth centile on their customised centile chart. These birth records were then audited to determine if they had been identified as SGA prior to birth, and if they had a GAP/GROW chart.

The rate of SGA births at CCDHB was 12.4%. This is slightly higher than the usual 10% and could be indicative of the CCDHB population, as CCDHB is a referral centre, and the audit was not limited to women domiciled in CCDHB. The audit showed that 15% of the 62 SGA babies had a neonatal GROW chart.

## WHERE ARE WE NOW?

Rolling reports show that by the end of 2020, 93% of births had a complete GAP/GROW record and the rate of SGA at birth was 11.7%. The SGA detection rate, that is, the proportion of babies SGA at birth that had an ultrasound estimated fetal weight below the tenth centile, or sequential measurements with slow or no growth, and/or one or more abnormal Doppler's, was 35.3%. This was slightly below the national average detection rate of 42.4%.

## NEXT STEPS

Work continues to ensure every pregnancy file from 24 weeks gestation has a GAP/GROW chart which plots fundal height and estimated birth weight. Increasing awareness, training, and knowledge of GAP/GROW for all LMC's and core staff is ongoing. The aim is for centile data at birth to be documented for all babies to help identify babies under the 10th centile for further audits. With a more complete dataset, the results become more meaningful.

# NEONATAL HYPOGLYCAEMIA POLICY

A systems analysis review was carried out in 2019 as a result of a serious adverse event that occurred around the failure to recognise a baby's initial and ongoing risks of hypoglycaemia, and that baby's seizure activity not being identified until their presentation to NICU.

Recommendations included;

- Review and update the existing policy 'Prevention and Management of Neonatal Hypoglycaemia in NICU and WHS' and incorporate broader thresholds
- Ensure the newborn birthweight has been plotted on a customised growth chart and the birthweight centile is calculated and entered into clinical notes. The woman's risk factors and subsequent risk factors for the infant should be documented in the clinical records and discussed at handovers.
- Develop scenario based education on hypoglycaemia and neonatal seizures and make it available to postnatal nursing staff, core midwives, and LMC's.

After carrying out a global literature search, the policy was reworked and incorporated feedback from the parents of the infant involved. The policy was jointly written by Maternity and NICU.

The scope of the policy was widened from 'Newborn babies at risk of hypoglycaemia, any baby with symptoms of hypoglycaemia, being cared for in NICU or WHS facilities' to '**All newborn infants** being cared for in NICU or WHS facilities'. Risk factors were updated, for example removing 'birthweight 2.5kg or less' and replacing it with 'Infants < 10th or > 95th centile on customised GROW-App NZ chart'. Additional clinical features of hypoglycaemia were added to the policy. The criteria for admission to the NICU was modified to ensure all at risk infants were included. The policy includes well defined step by step guidelines for monitoring and documentation of blood sugar levels and feeds.

Prior to and in conjunction with the policy being published, training of staff took place. Midwifery staff were trained by a combination of micro sessions and zoom sessions. Training included educating staff on the different aspects of the policy, the documentation required, and practical based skills, for example recognising the jittery behaviour versus seizure activity.

## NEXT STEPS

In collaboration with Victoria University of Wellington, Faculty of Health Summer Scholarship Programme, an audit to assess levels of compliance with the policy is planned for 2021. The title of the audit is 'Adherence to the *Prevention and Management of Neonatal Hypoglycaemia* policy at Capital Coast District Health Board for at-risk babies'.

# PRE-LABOUR, PRE-TERM RUPTURE OF MEMBRANES POLICY

The Pre-labour, pre-term rupture of membranes policy was due for review and required updating. The aim was to promote low risk women who have ruptured membranes preterm to be managed as outpatients. This is especially beneficial for women who are from out of region, and/or have other children.

A literature search was performed to gain the latest evidence and incorporated into the policy. Systems were also created to allow for outpatient monitoring to be done (antenatal clinic follow-up, transfer of care, relevant pamphlets).

A retrospective audit was conducted to establish a baseline of how many women who previously would have had inpatient monitoring now can have outpatient monitoring.

The ability for women to have outpatient monitoring rather than have to stay in hospital as an inpatient leads to improved health outcomes.

## NEXT STEPS

There will be ongoing evaluation to ensure this has good uptake while still ensuring women remain safe and have good care.

# FETAL FIBRONECTIN

The fetal fibronectin (fFN) test is a tool to assess the risk of preterm labour in symptomatic women between 22-36 weeks gestation and high-risk asymptomatic women between 18-28 weeks gestation. Previous versions of the fFN test have been qualitative but the latest system provides a quantitative assessment. The quantitative test has a sensitivity of 45-90% and specificity of 64-98% for preterm birth before 34 weeks, but varies according to gestation, prevalence of preterm birth and other predictive factors. The most useful aspect of fFN is its high negative predictive value, which ranges from 95-98.5%. This is clinically useful because it can allow women to be safely discharged home or transferred back to regional centres, and limits the unnecessary use of interventions such a steroids, tocolysis or magnesium sulphate.

A new fFN machine was purchased and installed in birthing suite. The obstetric team were taught by the company representatives to take fFN samples and the Associate Charge Midwife Manager (ACMM) team were trained to run the sample and to interpret the results. The ACMMs conduct regular quality control tests and the point of care laboratory team have responsibility to ensure the fFN machine is calibrated accurately. End users skill testing has taken place and there are regular refresher sessions for staff on how to use the new machine.

The introduction of the fFN machine into practice has led to objective support for making clinical decisions, less inpatient stays and unnecessary interventions for women who do not need it, and decreased costs for the DHB associated with inpatient admissions. The fFN test is considered a valuable tool for predicting preterm birth and will continue to be used in the WHS.

## NEXT STEPS

There would be scope for an audit of fFN test results and preterm birth in the future but none are planned at this point.

# ESTABLISH A CLINICAL PATHWAY FOR WOMEN WITH IDENTIFIED PLACENTAL IMPLANTATION ABNORMALITIES

The number of women with conditions where the developing placenta becomes abnormally attached to the wall of the uterus (womb) is increasing. This is thought to be due to the increasing Caesarean section rate worldwide. The condition placenta accreta spectrum (PAS) is associated with a high risk of injury to the woman during the birth, including requirement of massive blood transfusion, bladder or bowel injury, and hysterectomy. In some situations hysterectomy is a planned procedure at the time of birth; in others it may occur after the birth, or not at all. Careful pre-birth planning is critical to optimise care.

A multidisciplinary approach is considered best practice, and includes obstetrics and maternal-fetal medicine/ scanning, anaesthetics, midwifery and lactation support, gynaecology/oncology, interventional radiology, urology, and colorectal as required.

The WHS has developed a multidisciplinary pathway for women with PAS disorders, to allow appropriate pre-birth planning and consultation. There was involvement of all key stakeholders in the development of the guideline, which is evidence based and adapted to the local environment.

## NEXT STEPS

Once implemented, the treatment journey of the next ten women with PAS will be audited against the guideline, and any improvements necessary implemented.

# QUARTERLY STATISTICS SHEET

## July - Sept 2020
## CCDHB Maternity Statistics

**867 babies born in CCDHB region**

**61% of babies exclusively breastfed on discharge from maternity**

**68 Safesleep devices distributed**

**411 Vaginal Births**

**803 babies had hearing screenings**

**109 women booked with Community Midwifery Team**

**26 home births**

**42 babies born in water**

Capital & Coast District Health Board

2020 INTERNATIONAL YEAR OF THE NURSE AND THE MIDWIFE

Through collaboration with Wairarapa DHB, with thanks for allowing us to adopt their shared initiative, we began producing a quarterly statistics sheet for staff and whānau to see at a glance, how and what we are achieving.

Having statistics readily available allows staff and whānau visiting our unit to see some of our work achievements, or areas that could be improved upon. Each quarter we gather data on the all births in CCDHB facilities. The statistics sheet shows the percentage of well births (babies who discharged home with their mother) who were discharged exclusively breastfeeding, the number of safe sleep devices distributed to whānau, the number of babies born vaginally, the number of babies born at home, the number of babies born in water, the number of babies that had their hearing screened, and the number of women booked under the Community Midwifery Team.

These measures reflect how busy our units are and reinforce the positive contribution we are making to our communities. Advertising our vaginal birth, water birth, and home birth rates specifically reinforce the grounding of midwifery, regularly encouraging staff to continue being advocates for our birthing population.

The quarterly statistic sheets have been very well received by both staff and whānau. This will be a continuing initiative and hopefully as we move forward we will see positive improvement to our statistics.

# POSITIVE BIRTHING IMAGES AND SIGNAGE

**The WHS recognised the need to reclaim and visually improve our environment. Having a birthing space look and feel very medicalised can be disadvantageous to our birthing community. Even if someone's birth is complex, a visually pleasing space can only be of benefit.**

**The first step in the process was to rename 'Delivery Suite' to 'Birthing Suite'. This shifted the emphasis back to the person birthing, and away from the health practitioner. We also elected to promote wellbeing via positive images of pregnancy, birth and whānau. By reaching out and asking our consumers to take part, we ensured we could promote our unique community and see some familiar faces.**

**Our public walkway and hallways are now lined with beautiful, large images of our community. The feedback has been overwhelmingly positive and it is recognised as a step towards de-medicalising a medicalised space, allowing people to feel comfortable and encouraged, when entering their birthing experience.**

# LOOKING AHEAD TO 2021

*A detailed copy of the MQSP work programme 2020-2021 can be found in the chapter 'Ngā Āpitihanga – Appendices', under the section 'Appendix 1 – MQSP Action Plan'.*

## IMPROVING MATERNITY OUTCOMES FOR THE INDIAN COMMUNITY

Currently, Indian women have more adverse outcomes than any other ethnic group in the maternity system at CCDHB.

The Thirteenth Annual Report from the PMMRC found that in New Zealand, Indian women had the highest rate of stillbirth, and they are the only ethnic group not to have had a significant reduction in the stillbirth rate since 2001. They are overrepresented in NICU admissions, emergency caesarean sections, and formula feeding.

The PMMRC recommended that all DHBs demonstrate how they have developed and implemented models of maternity care that meet the needs of Indian women.

At CCDHB, Indian women make up 7% of birthing women, and in the CMT, Indian women make up over 15% of the women in our care.

CCDHB has set a goal to reduce the high number of adverse maternal and fetal outcomes for our Indian community by August 2022. The project includes developing a plan of action by August 2021 with specific recommendations of change and create an ongoing project team to implement and monitor actions.

Planned improvements and investigations will include;

- Literature search around Vitamin D supplementation
- Discussion with members of Indian communities around care received
- Discussion with dieticians around dietary advice to prevent gestational diabetes
- Literature search around aspirin in first trimester to women who only have Indian ethnicity as a risk factor

## BRINGING CCDHB PERINEAL CLINICAL INDICATOR RATES IN LINE WITH THE REST OF NEW ZEALAND

Clinical indicators are discussed in depth in the following chapter 'Improving quality of care'.

The WHS acknowledge that CCDHB rates for maternity clinical indicators six, seven, and nine are statistically significantly different from the average New Zealand rate. CCDHB women are less likely to have an intact perineum (Indicator Six- Standard primiparae (SP) with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy), more likely to have an episiotomy (Indicator Seven - SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear), and more likely to have an episiotomy and sustain a third or fourth degree tear (Indicator Nine- SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear).

The WHS would like to progress their vision of excellence by focussing further in this area, utilising more resources to help to alter these rates. We would also like to highlight and address the fact that there is inequity amongst ethnicities in CCDHB, with some ethnic groups being statistically significantly different from other ethnic groups in CCDHB in these same indicators.

The impact of a vaginal birth on the perineum is pivotal to subsequent birth methods. If a birth results in a third of fourth degree tear, or episiotomy extending into these, there is increased likelihood of the subsequent birth requiring a

caesarean section, which will in turn increase the DHB's caesarean section birth rate.

The condition of the perineum after birth can also have an effect on psychological wellbeing which can become multi-faceted in its flow on effect. This can involve bonding issues with baby, and can extend to affect decisions around future pregnancies and the maternal mental health of future pregnancies.

As a service, we have work to do to ensure women are getting optimal, evidence based care. MQSP has undertaken work in this area in recent years but acknowledge that it has not been successful, and further initiatives need to be explored. From 2021, the WHS will increase staff education on prevention, correct diagnosis, and treatment within scope.

We are planning four half day perineal care workshops to complement the three suturing workshops already running annually. These sessions will be aimed at midwives, doctors, and students of both professions. They will be complimented by micro teaching sessions such as ten minutes at the end of handover.

Posters, patient information handouts, and policies will be reviewed, including accessing and creating new material, and looking at optimal placement to target professionals and consumers alike.

Regular multidisciplinary team audits of birth which involved perineal tears meeting the criteria for indicators six, seven and nine will be held, using a regular and robust reporting mechanism to ensure transparency of statistics.

An evaluation will be completed six months after implementation.

## THE RAINBOW PROJECT

In 2020, the New Zealand Human Rights Commission (NZHRC) reported that 'while sexuality diverse communities have had the benefit of rapid gains in social acceptance in Aotearoa New Zealand, the pace of change for those with diverse gender identities, gender expressions, and sex characteristics has been much slower'. These communities are often referred to under the umbrella term of 'Rainbow'.

As health care staff, and as human beings, it's important that we are making those around us feel safe, comfortable and included. This includes those in the rainbow community. The NZHRC report gave a recommendation to 'support the development of guidelines, training and resources for health professionals on an informed consent model of healthcare for trans and non-binary people'. In 2021 planning will begin on the MQSP rainbow project.

The rainbow project will be a two pronged approach incorporating local and 2DHB projects. There is a plan in place to create a 2DHB Rainbow Maternity group with key stakeholders who will work with the community to ascertain what improvements need to occur and their priority. The group will then engage appropriately skilled persons to undertake and implement the improvements. One of their first projects is putting together a taskforce to create the pre-planned forum initiated by Hutt DHB to run on 10th December 2021.

There will be a drive at CCDHB to increase the number of staff who have done the Connect Me Rainbow learning package, with the ultimate goal to have all staff complete the package and so increase their knowledge.

Pronoun awareness education will begin. A review of all posters displayed in the maternity sector, and all maternity related posters will be reviewed to ensure they are inclusive and rainbow friendly.

CCDHB has a three year plan to be gender neutral. The plan is inclusive of disability. CCDHB is working with HVDHB and will provide education on pronouns, reassess imagery used in the facilities, and move to gender neutral toilets.

# Te whakapiki kounga taurimatanga

# Improving quality of care

# NEW ZEALAND MATERNITY CLINICAL INDICATORS

Clinical indicators give an opportunity for DHBs and local maternity stakeholders to identify areas for further investigation and potential service improvement.

The New Zealand Maternity Clinical Indicators show key outcomes for each DHB region, and secondary and tertiary maternity facilities.

Data is presented in the report in two ways.

- By DHB of residence: this data is intended to provide DHBs with information relevant to their usually resident population.
- By facility of birth: this data is intended to allow for the monitoring of trends over time at the facility level.

Data for these indicators were extracted for all pregnancies and live births recorded on the National Maternity Collection (MAT) dataset. MAT integrates maternity-related data from the National Minimum Dataset (NMDS) and LMC claim forms submitted to and compiled by the MOH.

Clinical indicators are monitored by comparing data for a defined subgroup of women who are considered to be 'low risk'. This group is referred to as the 'standard primiparae' (SP) group.

> A 'standard primiparae' is defined as 'a woman aged between 20 and 34 years at the time of birth, having her first baby at term (37 to $41^{+6}$ weeks gestation) where the outcome of the birth is a singleton baby, the presentation is cephalic and there have been no recorded obstetric complications that are indications for specific obstetric intervention'.

The 'standard primiparae' represents a woman expected to have an uncomplicated pregnancy. Intervention and complication rates for such women should be low and consistent across all hospitals nationally. Standard primiparae represent approximately 15% of all births but this proportion varies across DHBs.

The following page shows results for CCDHB as a whole and by each ethnic group, for the year 2018 (New Zealand Ministry of Health, 2020). The table and commentary is based on the clinical indicator results by DHB of residence. The data can also be seen here: www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/new-zealand-maternity-clinical-indicators-series

# OVERVIEW OF CCDHB VS NEW ZEALAND AVERAGE

In the table below, the CCDHB Average rate is compared against the New Zealand National Average rate and the clinical indicators are highlighted to show if the CCDHB rate is statistically significantly different to the New Zealand rate. The CCDHB data is further broken down by ethnicity to show how that ethnicity compares to the average New Zealand woman (whole of NZ, all ethnicities), and is again highlighted to show if the rate is significantly different from the New Zealand average rate. While some indicators have what appear to be significant differences in rates, small sample sizes can mean the differences fail to reach statistical significance. Indicators 13-15 are not included due to small numbers.

*Table 6:* **New Zealand Maternity Clinical Indicators 2018, by DHB of residence, showing CCDHB ethnicities compared to the whole of New Zealand**

| | Clinical indicators: CCDHB compared to the national average | New Zealand National Average | CCDHB Average | CCDHB ethnicity groups compared to the New Zealand national average (whole of NZ) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Māori | Pacific | Indian | Asian (excl Indian) | European /Other |
| 1 | Registration with an LMC in the first trimester | 72.7% | 76.4% | 66.4% | 55.8% | 75.5% | 77.1% | 82.1% |
| 2 | SP who have a spontaneous vaginal birth | 64.7% | 60.0% | 73.6% | 54.1% | 50.9% | 61.8% | 58.9% |
| 3 | SP who undergo an instrumental vaginal birth | 17.0% | 20.4% | 13.9% | 16.2% | 23.6% | 27.9% | 20.1% |
| 4 | SP who undergo caesarean section | 17.2% | 17.9% | 12.5% | 27.0% | 21.8% | 8.8% | 19.2% |
| 5 | SP who undergo induction of labour | 7.8% | 9.8% | 8.3% | 8.1% | 16.4% | 10.3% | 8.7% |
| 6 | SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) | 26.5% | 15.7% | 20.6% | 33.3% | 7.0% | 8.1% | 16.0% |
| 7 | SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear | 24.6% | 33.4% | 19.0% | 22.2% | 41.9% | 46.8% | 33.5% |
| 8 | SP sustaining a 3rd- or 4th-degree perineal tear and no episiotomy | 4.5% | 5.8% | 6.3% | 7.4% | 7.0% | 8.1% | 4.8% |
| 9 | SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear | 2.1% | 3.0% | 1.6% | 3.7% | 7.0% | 3.2% | 2.6% |
| 10 | Women having a general anaesthetic for caesarean section | 8.5% | 5.8% | 7.5% | 7.6% | 6.7% | 6.2% | 5.0% |
| 11 | Women requiring a blood transfusion with caesarean section | 3.0% | 2.9% | 3.7% | 4.3% | 1.3% | 1.5% | 3.0% |
| 12 | Women requiring a blood transfusion with vaginal birth | 2.1% | 2.0% | 2.3% | 2.6% | 1.4% | 2.0% | 1.8% |
| 16 | Maternal tobacco use during postnatal period | 9.4% | 4.5% | 18.5% | 8.1% | 0.0% | 1.1% | 1.5% |
| 17 | Preterm birth | 7.5% | 7.6% | 7.8% | 7.2% | 7.1% | 9.9% | 7.2% |
| 18 | Small babies at term (37–42 weeks' gestation) | 3.1% | 3.0% | 2.3% | 2.1% | 5.8% | 4.7% | 2.6% |
| 19 | Small babies at term born at 40–42 weeks' gestation | 29.9% | 36.0% | 30.8% | 16.7% | 38.5% | 29.4% | 42.5% |
| 20 | Babies born at 37+ weeks' gestation requiring respiratory support | 2.1% | 2.6% | 2.1% | 0.7% | 4.5% | 2.5% | 2.8% |

## CLOSER CONSIDERATION OF CLINICAL INDICATORS

**Indicator One; Registration with an LMC in the first trimester** is driven by the European and Other ethnicity group, and although Māori and Pacific women are doing better than their counterparts around the country, they generally have lower rates of early registration. CCDHB has seen improved rates over the ten year period with the rates of first trimester booking increasing by 28.2% for Māori and 29.9% for Pacific women, although there is still work to do.

**Indicator Two; SP who have a spontaneous vaginal birth** is driven by Indian and European/Other women who have lower rates of spontaneous vaginal births than the rest of the country, although their rates are the same as their ethnic cohort. 2020 saw the commencement of the Optimising Birth Project which aims to optimise the birth of the nulliparous woman. This project will hopefully improve CCDHB rates in indicator two.

**Indicator Three; SP who undergo an instrumental vaginal birth** is highest amongst Asian (excluding Indian) women at CCDHB but when compared nationally against other Asian (excluding Indian) women, CCDHB rates are not significantly different. Formalisation of the credentialing process for registrars has occurred enabling appropriate supervision to be identified.

**Indicator Six; SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) and Indicator Seven; SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear** are both driven by the Indian, Asian (excluding Indian), and European/Other ethnicity groups. When comparing the indicators by the rest of the ethnicity in NZ, only European/Other women have significantly higher rates, although they are joined by Māori women who have lower rates of an intact perineum (indicator six). The MQSP working group devised initiatives to improve access to warmed towels for the perineum during birth to mitigate the need for an episiotomy. Education on perineal protection is ongoing. There has been significant training in the diagnosis of perineal injury over recent years and pictorial aides were introduced to enable accurate diagnosis documentation. This may have impacted the rates of 'intact' genital tract diagnoses. MQSP work has been undertaken in recent years and new initiatives are ongoing. The rates of undertaking an episiotomy may be influenced by the mode of delivery, that is, higher assisted deliveries compared with CS will influence the data.

**Indicator Ten; Women having a general anaesthetic for caesarean section** is driven once again by the European and Other ethnicity group, with all other groups being statistically no better or worse than the rest of NZ or by the rest of their ethnicity group. Further work to consider factors influencing ethnic differences could be considered.

**Indicator Sixteen; Maternal tobacco use during postnatal period** shows Indian, Asian (excluding Indian), and European/Other ethnicities having significantly lower rates of smoking than the national average, but with Māori women have higher than average rates.

# EQUITY WITHIN CCDHB

While it is good to see how CCDHB compares nationally, to know whether we are equitable in our outcomes, we need to compare each ethnicity against the average for the DHB. Ideally we would like there to be no significant differences between any of the ethnicities. In the following table, the ethnicity columns show each ethnicity compared to the CCDHB average (all ethnicities). Once again, the clinical indicators are highlighted to show if the indicator is statistically significantly different from the CCDHB average. Again, while some indicators have what appear to be significant differences in rates, small sample sizes can mean the differences fail to reach statistical significance.

The data for the table below comes from CCDHB's Clinical Indicator Qlik application and shows data for the 2020 calendar year for CCDHB resident women. Indicators 13-15 are not included due to small numbers.

*Table 7:* **New Zealand Maternity Clinical Indicators 2020, by DHB of residence, showing CCDHB ethnicities compared to the CCDHB average**

| | Clinical indicators: CCDHB ethnicity groups compared to the CCDHB average | CCDHB | Māori | Pacific | Indian | Asian (excl Indian) | European / Other |
|---|---|---|---|---|---|---|---|
| 1 | Registration with an LMC in the first trimester | 80.3% | 70.5% | 50.2% | 83.3% | 82.4% | 87.8% |
| 2 | SP who have a spontaneous vaginal birth | 58.6% | 65.0% | 69.8% | 44.1% | 54.2% | 57.8% |
| 3 | SP who undergo an instrumental vaginal birth | 23.0% | 18.8% | 7.0% | 41.2% | 20.3% | 24.9% |
| 4 | SP who undergo caesarean section | 18.4% | 16.3% | 23.3% | 14.7% | 25.4% | 17.3% |
| 5 | SP who undergo induction of labour | 11.0% | 7.5% | 11.6% | 32.4% | 6.8% | 10.3% |
| 6 | SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) | 16.4% | 26.9% | 15.2% | 6.9% | 0.0% | 17.7% |
| 7 | SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear | 34.6% | 19.4% | 21.2% | 58.6% | 36.4% | 37.3% |
| 8 | SP sustaining a 3rd- or 4th-degree perineal tear and no episiotomy | 4.5% | 3.0% | 12.1% | 6.9% | 9.1% | 2.8% |
| 9 | SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear | 3.8% | 1.5% | 0.0% | 3.4% | 6.8% | 4.4% |
| 10 | Women having a general anaesthetic for caesarean section | 7.5% | 7.9% | 9.3% | 9.8% | 5.9% | 7.0% |
| 11 | Women requiring a blood transfusion with caesarean section | 3.2% | 6.6% | 2.8% | 9.8% | 3.0% | 1.4% |
| 12 | Women requiring a blood transfusion with vaginal birth | 2.1% | 1.2% | 1.0% | 2.9% | 4.7% | 1.4% |
| 16 | Maternal tobacco use during postnatal period | 5.1% | 18.0% | 10.2% | 0.0% | 0.0% | 1.9% |
| 17 | Preterm birth | 8.5% | 10.5% | 7.3% | 12.9% | 8.4% | 7.5% |
| 18 | Small babies at term (37–42 weeks' gestation) | 2.8% | 3.3% | 3.2% | 9.5% | 2.7% | 1.7% |
| 19 | Small babies at term born at 40–42 weeks' gestation | 32.1% | 37.5% | 33.3% | 27.8% | 44.4% | 26.9% |
| 20 | Babies born at 37+ weeks' gestation requiring respiratory support | 2.8% | 2.1% | 1.8% | 2.7% | 2.7% | 3.2% |

## CLOSER CONSIDERATION OF CCDHB CLINICAL INDICATORS BY ETHNICITY

The areas of inequity, (where one or more groups has a more desirable outcome, and one or more groups has a less desirable outcome in the same indicator) are indicators one, three, six, seven, eleven, sixteen, and eighteen. Some of these indicators contain small numbers and the data changes from one year to the next. The main areas where there seems to be consistent inequity appear to be **Indicator One; Registration with an LMC in the first trimester**, and **Indicator Sixteen; Maternal tobacco use during postnatal period**.

While CCDHB has high rates of early registration with an LMC when compared to the whole of New Zealand, there is disparity between ethnicities within CCDHB. There is work to be done to facilitate early booking of Māori and Pacific women registering with an LMC in the first trimester. There is a need to design programs to support lowering rates of tobacco use by the Māori and Pacific women birthing at CCDHB. MQSP focus on the optimisation of care for young Māori women is planned.

The most advantaged ethnicity is the European/ Other group, who are better off in four indicators and have no indicators where they are worse off than the average CCDHB woman. Maori women are more advantaged in three indicators and less advantaged in two. Pacific women are more advantaged in two indicators and less advantaged in another two.

The groups who are most disadvantaged by inequity are the Asian (excluding Indian) and Indian ethnicities. Asian (excluding Indian) women are more advantaged in one indicator but are less advantaged in two. Indian women are more advantaged in one indicator but have the highest number of indicators (six) where they are worse off than the average CCDHB woman.

Indian women are more likely than the average CCDHB woman to have an instrumental birth **(Indicator Three - SP who undergo an instrumental vaginal birth)**, an induction **(Indicator Five - SP who undergo induction of labour)**, an episiotomy **(Indicator Seven - SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear)**, a blood transfusion with caesarean section **(Indicator Eleven - Women requiring a blood transfusion with caesarean section)**, a preterm birth **(Indicator Seventeen - Preterm birth)**, and have a small baby at term **(Indicator Eighteen - Small babies at term [37–42 weeks' gestation])**.

Work to focus on the maternity care of Indian women is planned. Please see the section 'Looking ahead to 2021- Improving Maternity Outcomes for the Indian Community' in chapter 'Steps towards excellence', and section 5.8 in Table 11 in the appendices.

# SOURCES OF GUIDANCE FOR MQSP WORK PROGRAMME

## PERINATAL EDUCATION MEETING THEMES

CCDHB hold monthly perinatal review meetings with multidisciplinary input. The meetings bring together obstetric, midwifery and neonatal staff for case reviews, including neonatal encephalopathy reviews. The aims of these meetings are learning, discussing practice, and identifying areas for systems improvement. Other disciplines involved include, anatomic pathology and genetics services. All of these groups provide valuable advice, assisting with the formal PMMRC classification process. This multidisciplinary collaborative approach is in keeping with PMMRC's overall theme of "Working together across the system towards zero preventable deaths or harm for all mothers and babies, families and whānau".

By theming case reviews at the meeting, we identify educational topics that relate to the cases presented, providing learning and discussion about issues in the context of clinical cases. This facilitates shared learning and possible directions for improvement in a multidisciplinary forum.

In 2020 meeting themes included:

- Bereavement services; reminding people of the government website wheturangitia.services.govt.nz/. This website can provide valuable local information for whānau experiencing the death of a baby or child through miscarriage, stillbirth, neonatal death, fetal abnormality and sudden unexplained death in infancy.
- Local Community Midwifery Team response to attending to the needs of women during COVID-19 lockdown restrictions
- Identifying growth restriction and providing ongoing growth surveillance using GROW charts and scanning services
- Identifying causes for early growth restriction
- The role of genetic services in investigations and providing input for families with identified or potential genetic issues

We are working with the National Perinatal Pathology Service established in 2019, to sustain the increased and appropriate uptake of best practice investigations. We continue to strive to ensure that those whānau that experience the loss of a baby can have as much information as possible for planning any future pregnancy.

## MORBIDITY AND MORTALITY MEETINGS

Morbidity and mortality review meetings were held on a monthly basis and alternated between maternity and gynaecology. Due to COVID-19 and the resulting nationwide lockdown, meetings were paused for two months, resuming with a joint maternity and gynaecology meeting in June. As a result of the changing alert levels, video conferencing was introduced and continues to be a way for health practitioners to attend.

Adverse outcomes were reviewed and speakers from the WHS presented cases, latest research, and developed recommendations to minimise future morbidity risks. Involved members from other specialties were also invited to attend. Presentations included severe wound infection, pelvic abscess after hysterectomy, intra-operative death after hysteroscopy, head entrapment at second stage caesarean section, and postnatal iron infusion.

Outcomes included:

- Teaching sessions for resident medical officers (RMOs) regarding wound infection care
- Consider radiologically-guided drainage for post-operative pelvic abscesses if appropriate
- Ensuring good communication to regional hospitals when transferring patients back
- Education sessions for RMOs on manoeuvres for breech extraction at second stage caesarean section
- Postnatal criteria for iron infusions

Meetings were attended by clinical staff and LMCs. Findings were reported through clinical governance framework, and to staff through department communication channels.

## PERINATAL AND MATERNAL MORTALITY REVIEW COMMITTEE

The PMMRC provides a comprehensive reporting system on perinatal and maternal death, a network of nationally linked coordinators, and a framework for assessing cases with the aim of reducing perinatal deaths while continuously improving the quality of systems and policy.

The committee reviews the deaths of babies (from 20 weeks of pregnancy to 28 days after birth) and women who die as a result of pregnancy or child birth, and advises on how to prevent such deaths.

## MATERNAL MORBIDITY WORKING GROUP

The PMMRC established the Maternal Morbidity Working Group (MMWG) to investigate maternal morbidity. The vision created by the MMWG is 'better outcomes for mothers in New Zealand', with an aim to 'to improve the quality and experience of maternity care for women, babies, families and whānau, informed by robust, consistent, reportable and women-centred maternal morbidity review'.

## NATIONAL MATERNITY MONITORING GROUP

The NMMG plays a key role in the implementation of the maternity standards and oversees the quality and safety of New Zealand's maternity services at a local, regional, and national level. They provide strategic advice to the MOH on priorities for national improvement based on the national maternity report, nationally standardised benchmarked data, and the audited reports from DHB service specifications (NMMG Terms of reference 2016-2019). Annually DHBs are provided a national overview of the quality and safety of the New Zealand maternity sector, and advised of priorities for local improvement.

## HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

The HQSC patient deterioration programme aims to reduce harm from failures to recognise or respond to acute physical deterioration for all adult inpatients by July 2021. The programme works with hospitals to establish recognition and response systems for managing the care of acutely deteriorating patients.

Key projects for 2020 included the newborn observation and early warning system, and the maternity vital signs chart and maternity early warning systems.

# MMWG RECOMMENDATIONS

| *Table 8:* **MMWG Practice points for DHBs and CCDHB progress 2020** | |
|---|---|
| **Practice points for DHBs (3rd Annual Report, 2019)** | **CCDHB progress as at end of 2020** |
| **Principles of Te Tiriti** | |
| *DHBs should partner with wāhine Māori (Māori women) and their whānau in meaningful, participatory ways to understand their maternity health priorities and work with them to design and implement solutions. These solutions must recognise and respond to the authentic needs of Māori aspirations for self-determination in the health and wellbeing of themselves and their whānau, and must safeguard Māori cultural concepts, values and practices. We highly recommend using co-design to best develop a service that is responsive to the needs and outcomes of wāhine Māori.* | This work will be included in the MQSP action plan for 2022. |
| **Addressing equity** | |
| *DHBs should use the Health Equity Assessment Tool (the HEAT) to assess their services for the impact on health equity. The HEAT aims to promote equity in health in Aotearoa New Zealand. It comprises of 10 questions for assessing policy, programme or service interventions for the current or future impact on health inequities. The HEAT is a flexible tool that can be used in its entirety or, alternatively, selected questions can be asked for specific purposes. The HEAT is available online at www.health.govt.nz/publication/health-equity-assessment-tool-users-guide.*<br>*DHBs should increase their surveillance and monitoring of maternal morbidity, with a focus on identifying opportunities for achieving equitable outcomes for wāhine Māori and their whānau. The MMWG's maternal morbidity review toolkit for maternity services and the HEAT can be used to support this process, as well as Dr Jones' framework.*<br>*When undertaking maternal morbidity reviews, panels should use the HEAT and Dr Jones' framework to apply an equity lens to the review process. They should consider whether inequities existed in relation to the maternal morbidity event, and if so, how the inequities occurred and how they will be addressed through the review and recommendation process. When possible, this should be done in partnership with the woman and her family and whānau.*<br>*When data on maternal morbidity reveals inequities, DHBs should initiate 'free, frank and fearless' conversations about the causes of inequitable outcomes in maternity, and how they can be proactively addressed. In addressing these, DHBs should focus on the way they work, the environment they work in, and the systems and processes within which they deliver care, and should take action in all of these domains.* | This work will be included in the MQSP action plan for 2022. |

| *Table 8:* **MMWG Practice points for DHBs and CCDHB progress 2020 (continued)** | |
|---|---|
| **Practice points for DHBs (3rd Annual Report, 2019)** | **CCDHB progress as at end of 2020** |
| **Women's narratives** | |
| *Women who are admitted to an HDU or ICU should be offered the opportunity to debrief and discuss their experience between three and six months following the event of maternal morbidity. Maternity services should ensure this appointment is arranged through an appropriate clinical appointment (as close to the woman's residence as possible), such as gynaecology outpatient, prior to discharge from the maternity service, directing her to agencies to enable attendance.* | Women are offered an appointment to debrief about 3 months after an event. This is usually carried out in a gynaecology clinic or at a prearranged time and place with the woman. Women will sometimes be offered an appointment with a WHS counsellor around the time of their birth if they feel that would help them deal with what they have experienced. |
| **Preventing delays** | |
| *DHBs should ensure there are enough senior medical staff and resources available for both acute work and elective theatres or clinics. Reference should be made to RANZCOG's Categorisation of urgency for caesarean section when planning staffing and equipment.* | Increasing complexity and acuity pressure make this an ongoing area for focus to minimise the need to defer elective work when acuity is high. |
| **Assisted birth techniques** | |
| *DHBs should ensure they teach and maintain the obstetric skillset and proficiency to select and apply the most successful delivery technique to effect urgent delivery. In cases of severe maternal or fetal compromise, the choice of delivery mode or technique may be different to the options for the more common scenario of failure to progress.* | Registrars have teaching sessions on assisted vaginal delivery. The kiwicup omnicup is now available and its introduction was accompanied by a teaching session.<br>Registrars are supervised performing assisted deliveries until they are deemed to be of an adequate standard to be credentialed to perform them independently. A consultant is present for all trials of assisted deliveries. |
| **ISBAR** | |
| *The use of simulation multidisciplinary training and team-working helps to improve communication.*<br>*The use of structured communication tools, such as ISBAR (Identify–Situation–Background–Assessment–Recommendation), also helps to establish a consistent communication approach.* | PROMPT and Newborn Life Support workshops are offered several times a year and are open to LMCs and DHB employees<br>The importance of using the ISBAR tool is also conveyed to midwives on the annually mandated emergency skills refresher days. |

# NMMG RECOMMENDATIONS

| *Table 9:* **NMMG recommendations and CCDHB progress 2020** | |
|---|---|
| **An overview of the NMMG's recommendations for 2019 (7th Report, Dec 2020)** | **CCDHB progress as at end of 2020** |
| **Maternal Mental Health** | |
| *All New Zealand women need equitable access to appropriate mental health services during pregnancy and postpartum. The NMMG recognises the importance of taking a cross-sector approach to providing effective mental health services for women.*<br>*We expect to see DHBs report on mental health referral and treatment pathways and will ask DHB Planning and Funding divisions to advise what percentage of their mental health budget is allocated to providing maternity mental health services.* | Please see the section 'Maternal mental health' in chapter 'Maternity quality and safety'. In 2020, 'Access and Choice' a new primary mental health initiative significantly increased the availability of free mental health support to women and families in primary care. In addition, in 2020 CCDHB commenced planning to further enhance the network of support and services for women experiencing mild to moderate distress related to their pregnancy. This work will translate to new services in 2021. |
| **Place of Birth** | |
| *The NMMG supports strengthening primary maternity services including timely, equitable access to community-based primary maternity care as appropriate for women. We would like to see the provision of appropriate services so that parents feel safe to birth in non-hospital environments, including parents receiving evidence-based information to inform their decisions about place of birth.*<br>*We recommend DHBs, Primary Health Organisations (PHOs) and the Midwifery Council of New Zealand report on how women are informed of the full range of place of birth options; and outline methods used to promote primary birthing facilities for appropriate women.* | This recommendation will feed into a 2DHB Maternal and Neonatal System Strategy Planning piece due to commence in quarter two, 2021.<br>The Pēpe Ora website and provider network service linkages ensure that a wide range of antenatal education in our region is visible and available to families to choose from, when looking at learning evidence-based information to inform decisions about place of birth. |
| **Equitable access to contraception** | |
| *All women need access to free contraceptive services from the immediate postpartum period. We are dedicated to investigating equity of access to Long-acting Reversible Contraceptives (LARCs) by reviewing information from DHBs about availability and funding of LARCs, and exploring and promoting examples of good practice where DHBs ensure equity of access to LARCs for all consumers, including groups of women with poorer maternity outcomes.*<br>*The NMMG would like DHBs to report on access to postnatal contraception for all women, processes in place for supporting women to make informed choices, and services available that support women to obtain their choice of contraception.* | Please see section 'Equitable access to contraception' in the chapter 'Maternity quality and safety' to see information on age and ethnicity breakdown of women receiving LARCs at CCDHB. |

# ADVERSE EVENTS

Adverse events are any 'event with negative or unfavourable reactions or results that are unintended, unexpected or unplanned'. Adverse events or near misses are reported in an effort to increase patient safety by examining the situation in which the event took place. A total of 397 reportable events were generated in the WHS during 2020, with 109 (27%) events being categorised as Maternal/Childbirth, and the next highest categories being Staffing with 66 (17%) events, and Clinical Care/Service/Coordination and Staff and Others Health and Safety, both with 58 (15%) events.

## SERIOUS ADVERSE EVENTS – SEVERE (SAC1) AND MAJOR (SAC2)

The Severity Assessment Code (SAC) is a numerical rating which defines the severity of an adverse event and as a consequence the required level of reporting and investigation to be undertaken for the event. (Source: https://www.hqsc.govt.nz/our-programmes/adverse-events/publications-and-resources/publication/2933/)

Five reportable events in 2020 were considered as severe (SAC 1) and seven as major (SAC 2) events, and fully investigated by review teams, with any learnings applied to reduce the risk of a similar event occurring.

Some of the recommendations included: criteria for sending a placenta to the laboratory, implementation and education of NOC/NEWS, investigation of transitional baby care unit feasibility, improved communication processes around the care of women with diabetes in pregnancy, and senior on call medical staff to provide support for registrars who are not credentialed, which may involve remaining on site.

# Ngā Āpitihanga
# Appendices

# APPENDIX 1 – MQSP ACTION PLAN

| *Table 10:* **MQSP work programme 2020-2021** | | | |
|---|---|---|---|
| **Project No.** | **Improvement Initiative** | **Objective / Descriptor /Actions** | **Planned delivery** |
| **1** | **Optimising Term Birth** | | |
| 1.1 | Appoint a project manager | • Appoint a project manager for six months fulltime to progress all optimising term birth projects by June 2020 | Complete |
| 1.2 | Robson 10 reporting | • Utilise the Robson 10 classification system for reporting and categorising all pregnant women | Complete |
| | | • Assess and improve current data collection where required | |
| 1.3 | Literature review | • Review literature and actions which have reduced the caesarean section rate in other maternity services around New Zealand | Complete |
| 1.4 | Audit outcomes for Group 1 and Group 2A women | • Over a two month period (May/June 2020) review the outcomes of all women in group 1 and group 2a whose birth resulted in a caesarean section | Complete |
| | | • Identify recurring themes and areas requiring further investigation | Ongoing |
| | | • Consider what, if any, alternative actions / management of care may have been required | |
| | | • Present findings of initial audit to upcoming hui | Complete |
| | | • Assemble a midwifery, and obstetric team to review the outcomes of group 1 and group 2a women | |
| | | • Embed regular auditing of outcomes into business as usual | |
| 1.5 | Hui for providers of maternity care | • Present the Robson 10 classification system to all | Complete |
| | | • Advise of work being undertaken on ERAS pathway (see project 1.7) | |
| | | • Present findings of group 1 and group 2a audit for the months of May and June 2020 | |
| | | • Call for interested providers of healthcare to join a time-bound working group on optimising birth | |
| 1.6 | Consider potential effectiveness of manual rotation from occiput posterior (OP) to occiput anterior (OA) for women with cervical dilation over 8cm | • Prospective audit of current rates of OP and obstructed labours resulting in caesarean section | Complete |
| | | • Promote awareness of this labour management option | Ongoing |
| | | • Increase training in this procedure | |

| | | | |
|---|---|---|---|
| 1.7 | Develop an ERAS pathway for women having elective caesarean sections | • Agree on a pathway with midwifery, obstetric, anaesthetic leads, and LMCs including private obstetric LMCs | Complete |
| | | • Promote ERAS pathway and undertake relevant education | Ongoing |
| | | • Amend written information given to women | Complete |
| | | • Introduce patient controlled oral analgesia | 2021 |
| | | • Investigate potential of midwifery-led discharge process, streamlining the process, leading to timely discharge | |
| | | • Translate the ERAS pamphlet in to different languages to promote equitable access to care | |
| 1.8 | Setting the scene for future pregnancies | • Develop a robust process where women whose birth has resulted in a caesarean section are advised of their likelihood of achieving a vaginal birth in a future pregnancy, before leaving hospital inpatient services | Yet to commence |
| 1.9 | Develop maternity key performance indicator (KPI) dashboard | • Develop a maternity dashboard inclusive of clinical indicators which is visible to all providers of maternity care | Complete |
| | | • The Qlik application will likely be used to provide this data | |
| 1.10 | Primipara induction of labour (IOL) | • Improve/reduce primipara IOL rates | Planning |
| | | • Design a tool for IOL indications, optimal process and decisions for caesarean sections | |
| **2** | **Optimising Preterm Birth** | | |
| 2.1 | Explore alternative model of care options for women presenting with preterm pre-labour rupture of membranes (PPROM) | • Audit number of women admitted to CCDHB with PPROM in 2018 | Complete |
| | | • Consider the possibility of caring for women with PPROM in the community, or (if from out of town) in a motel near the hospital | |
| | | • Consider initial inpatient stay of up to 72 hours. If the woman is not in labour after 72 hours and all is well, discharge from hospital. | |
| | | • Follow up care – twice weekly, shared care arrangement, between obstetric and community midwifery team | |
| | | • Education of all health care providers | Ongoing |
| | | • Consider who best to contact in case of emergency | Complete |
| | | • Develop brochure and screening tool for women to use in the community | |
| 2.2 | Preterm birth referrals | • Improve the antenatal screening and referral process for women at risk of preterm birth | Ongoing |
| | | • Establish a structured triage process | |
| | | • Modify the discharge summary information sent to women, LMCs, and GPs about the importance of early referral in future pregnancies | Complete |
| | | • Develop a standardised letter regarding aspirin use in pregnancy | |
| | | • Create an information sheet regarding preterm birth signs and symptoms | Ongoing |
| | | • Consider a preterm birth outpatient clinic | Not progressing |

| | | | |
|---|---|---|---|
| 2.3 | Preterm birth management audit | • Audit preterm births that occurred within CCDHB facilities in 2018. Include audit of steroids for lung development, and magnesium sulphate administration for neuroprotection | Complete |
| | | • Identify disparities within the data with the aim of standardising care once reviewed by epidemiologist | 2021 |
| | | • In collaboration with NICU, determine 23 – 26 weeks survival rates | Ongoing |
| 2.4 | Create guideline that includes treatment of ROM inclusive of preterm birth management | • Create spontaneous pre-labour rupture of membranes guideline (PROM) that includes pre-term PROM (PPROM), to provide recommendations for management | 2021 |
| | | • Create preterm labour management algorithm to coordinate care according to gestation | |
| | | • Create PPROM outpatient management form, to enable self-monitoring for signs of infection | Complete |
| **3** | **Maternal Outcomes** | | |
| 3.1 | New Zealand Maternity Clinical Indicator seven, standard primipara with episiotomy, without mention of third or fourth degree tear | • Aim to reduce our rates of third and fourth degree tears | 2021 |
| | | • Audit the 2018 data on clinical indicator seven | |
| | | • Practice improvement in episiotomy method, with training | |
| | | • Perineal support education | |
| 3.2 | Develop a DHB wide maternal sepsis pathway | • Improve identification of sepsis early, and action timely care | Complete |
| | | • Develop a policy on maternal sepsis, inclusive of signs, symptoms, and immediate treatment | |
| | | • Develop a one page sepsis pathway checklist | |
| | | • Create sepsis grab boxes/trolleys and implement a process to restock them after use | |
| | | • Offer education to providers of maternity care | |
| | | • Re-audit outcomes in 2021 | 2021 |
| 3.3 | Following implementation of the charts in maternity, the maternity vital signs chart will be rolled out across CCDHB | • Roll out maternity vital signs chart for use on women who are pregnant or recently pregnant (within 42 days), on medical, surgical, and mental health wards | 2021 |
| | | • Provide comprehensive education to each of the ward educators, senior nurses and doctors preceding this roll out | Complete |
| 3.4 | Audit compliance of maternity vital signs chart in maternity sector | • Audit compliance with use of the chart and use of escalation pathways | Complete |
| | | • Implement action plan if audit results show non-compliance issues | Not required |

| | | | |
|---|---|---|---|
| **4** | **Neonatal Outcomes** | | |
| 4.1 | New Zealand Maternity Clinical Indicator 20, term newborns requiring respiratory support | • Aim to reduce the rate of term newborns requiring respiratory support | Planning |
| | | • Formalise GAP/GROW contract and appoint to this role | Complete |
| | | • Detailed initial GAP/GROW mandatory training carried out by the Perinatal institute via Zoom | Ongoing |
| | | • Undertake retrospective audit of 500 births from 2017 to gain baseline rates of SGA births | Complete |
| | | • Continue to offer annual education in fetal surveillance education to all maternity care providers free of charge | BAU |
| | | • Continue regular PROMPT days for the multidisciplinary team. Encourage LMC attendance at primary birthing unit education days. | |
| | | • Encourage multidisciplinary engagement with the monthly morbidity and mortality meetings | |
| | | • Encourage multidisciplinary attendance at the perinatal education meetings | |
| 4.2 | Neonatal encephalopathy (NE) outcomes | • Reduce the number of newborns born at CCDHB with NE | Ongoing |
| | | • Use the PMMRC process and continue ongoing audit of all babies diagnosed with NE | BAU |
| | | • Introduce newborn observation chart and newborn early warning score to maternity | Complete |
| 4.3 | Implement the roll out of the nationally agreed NOC/NEWS newborn observation charts | • Appoint a NOC/NEWs champion | Complete |
| | | • Provide face to face and online education packages | |
| | | • Purchase additional equipment to enable accurate newborn observations | |
| | | • Agree on go-live date of 19 October 2020 | |
| | | • Implement DHB wide | |
| **5** | **Improving Equity** | | |
| 5.1 | Understanding the needs and outcomes of women 20 years and younger | • Improve our understanding of pregnant women 20 years and younger | 2022 |
| | | • Audit their birth outcomes | |
| | | • Engage stakeholders to explore difficulties or barriers to accessing LMCs and maternity services | |
| | | • Develop strategies to further engage with this group | |
| 5.2 | Smoking | • Reduce the number of Māori and Pacific women smoking during pregnancy | BAU |
| | | • Engage with young Māori and Pacific women to explore the barriers to them stopping smoking during pregnancy | |
| | | • Revisit and re-promote nicotine replacement therapy with staff | |
| 5.3 | Survey women about their inpatient experience | • Seek to find ways we can improve our services | Ongoing |
| | | • Create an easily accessible feedback survey, which women or whānau can complete on an iPad or by scanning the QR code | Complete |
| | | • Results will be audited monthly | BAU |
| | | • Staff will be notified of feedback pertaining to their area | |

| | | | |
|---|---|---|---|
| 5.4 | Build a culturally appropriate workforce | • The ethnic diversity of our workforce should reflect that of the women we care for | Ongoing |
| | | • Develop a midwifery Māori and Pacific continuity of care team to provide care for Māori and Pacific women, especially those with complex needs | Complete |
| 5.5 | Cultural competency programme | • Improve our workforce's cultural appropriateness and awareness | Ongoing |
| | | • Facilitate education opportunities | Ongoing |
| | | • Arrange a guest speaker to complete a series of talks on cultural issues | Complete |
| | | • Include specific cultural feedback on patient feedback surveys | |
| | | • Survey Indian women about the model of care required | 2021 |
| 5.6 | Safe sleep | • Aim to reduce the rate of SUDI | Ongoing |
| | | • Continue to promote the availability of safe sleeping advices to providers of maternity care and women | |
| | | • Provide wahakura and pepi pods when needed | |
| | | • Aim to meet the MOH target for wahakura/pepi pod distribution | |
| 5.7 | Monitor key maternity indicators by ethnicity to identify variations in outcomes and improve areas where there are differences in outcomes | • Create Qlik application showing maternity clinical indicators which can be filtered by ethnicity | Complete |
| | | • Examine maternity clinical indicators by ethnicity to identify variations | 2021 |
| 5.8 | Reduce the high number of adverse maternal and fetal outcomes for our Indian maternity community | • Improve our understanding of pregnant Indian women | 2021 |
| | | • Audit their birth outcomes | |
| | | • Develop a plan of action with specific recommendations of changes and actions | |
| | | • Create an ongoing project team to implement and monitor actions | |
| | | • Create a vitamin D guideline | 2022 |
| | | • DHB-specific addendum to national gestational diabetes testing guideline to be created | |
| | | • GROW charts usage encouraged for community team midwives | |
| | | • Further investigation needed on influence of ethnicity of gestational length variance and guidelines following this | |
| | | • Indian breastfeeding peer support counsellors to be recruited | |
| | | • Recruitment within the Indian community for a Maternity Consumer Representation of the MQSP governance group | |
| | | • Review of handout material given to maternity clients to assess cultural appropriateness and possibility of translation. | |

| | | | |
|---|---|---|---|
| **6** | **Bereavement Midwife** | | |
| 6.1 | Investigate the possibility of employing a bereavement midwife | • Engage stakeholders to explore difficulties or barriers to accessing LMCs and maternity services | Planning |
| | | • Develop strategies to further engage with this group | |
| | | • The bereavement midwife will be the point of contact for women to prevent them having to re-tell their story multiple times. | |
| **7** | **NMMG recommendations** | | |
| 7.1 | NMMG recs for 2020 relevant to MQSP (1) | • Encouraging low-risk women to birth at home or in a primary facility | Yet to commence |
| | | • Promotion of primary birthing facilities | 2021 |
| 7.2 | NMMG recs for 2020 relevant to MQSP (2) | • Equitable access to post-partum contraception, including regular audit | Yet to commence |
| 7.3 | NMMG recs for 2020 relevant to MQSP (3) | • Equitable access to primary mental health services | Yet to commence |
| | | • Maternal mental health referral & treatment pathway | |
| **8** | **MMWG recommendations** | | |
| 8.1 | MMWG (Subgroup of PMMRC) (1) | • Implementation of Hypertension guideline, with a review/ re-stock of medications to ensure easy availability & administration in acute care settings | Complete |
| 8.2 | MMWG (Subgroup of PMMRC) (2) | • Use of the Health Equity Assessment Tool (the HEAT) to assess services for the impact of health equity | Yet to commence |
| 8.3 | MMWG (Subgroup of PMMRC) (3) | • Establish a clinical pathway for women with identified placental implantation abnormalities | 2021 |

# APPENDIX 2 – DEFINITIONS

This report includes maternal and infant data pertaining to women giving birth to babies at and beyond twenty weeks gestation at any of the three birthing facilities in the CCDHB area. Also included are those women who were booked to give birth at a facility but had an unplanned home birth or gave birth en route to a birthing facility.

A monitoring and audit programme of the Perinatal information management system (PIMS) maternity database includes daily and monthly checks, with queries and corrections made on key data fields.

Assumptions applied in the analysis of maternity data:

- the maternal age was calculated as at the time of the birth
- all babies born from 20 completed weeks of pregnancy, or weighing over 400 grams at birth if the gestation is unknown are included
- for multiple pregnancies, only one mode of birth has been assigned to the mother, with the mode prioritised to the mode of highest intervention
- maternal obstetric and caesarean history was determined from the 'parity' and 'caesarean history' data fields in PIMS

## ETHNICITY REPORTING

Reporting of ethnicity is complex and different systems are used in various reports.

The New Zealand MOH uses a prioritised ethnicity group classification system (New Zealand Ministry of Health, 2010). This system is used when an individual chooses multiple ethnicities based on their preferences or self-concept. The classification system then determines the ethnicity group value for multiple ethnicities using a hierarchical system of 21 ethnicity descriptions. This is based on the following priority: Māori, Pacific Peoples, Asian, other groups except Other European, New Zealand European. Tables within this report have grouped New Zealand European, Other European, and Other Ethnicities together as a combined number where MOH nationwide data is used. Indian women are separated out from Other Asian women to reflect the growing disparity of outcomes for Indian women.

*Table 11:* **Prioritised ethnicity groups**

| Ethnicity group | Ethnicity | Priority order (MOH) |
|---|---|---|
| Māori | Māori | 1 |
| Pacific Peoples | Tokelauan | 2 |
| | Fijian | 3 |
| | Niuean | 4 |
| | Tongan | 5 |
| | Cook Island Māori | 6 |
| | Samoan | 7 |
| | Other Pacific Island | 8 |
| | Pacific Island not further defined | 9 |
| Other Asian | Southeast Asian | 10 |
| | Chinese | 12 |
| | Other Asian | 13 |
| | Asian not further defined | 14 |
| Indian | Indian | 11 |
| Other | Latin American/Hispanic | 15 |
| | African | 16 |
| | Middle Eastern | 17 |
| | Other/Not stated | 18 |
| Other European | Other European | 19 |
| | European not further defined | 20 |
| NZ European | New Zealand European | 21 |

# ABBREVIATIONS AND DEFINITIONS

*Table 12:* **Abbreviations**

| | |
|---|---|
| 2DHB | Capital & Coast, and Hutt Valley DHBs |
| 3DHB | Capital & Coast, Hutt Valley, and Wairarapa DHBs |
| ACC | Accident Compensation Corporation |
| ACMM | Associate Charge Midwife Manager |
| BAU | Business as usual |
| BFHI | Baby friendly hospital initiative |
| CCDHB | Capital & Coast District Health Board |
| CMT | Community midwifery team |
| CS | Caesarean section |
| CTG | Cardiotocograph |
| DHB | District Health Board |
| ERAS | Enhanced recovery after surgery |
| fFN | Fetal fibronectin |
| GAP | Growth Assessment Protocol |
| GP | General practitioner |
| GROW | Gestational related optimal weight |
| HEAT | Health Equity Assessment Tool |
| HQSC | Health Quality and Safety Commission |
| ICU | Intensive care unit |
| IOL | Induction of labour |
| ISBAR | Identify-Situation-Background-Assessment-Recommendation |
| ISSN | International standard serial number |
| KMU | Kenepuru maternity unit |
| KPI | Key performance indicator |
| LARC | Long-acting reversible contraceptives |
| LMC | Lead maternity carer |
| MAT | National maternity collection |
| MEWS | Maternity early warning score |
| MFM | Maternal fetal medicine |
| MgSO4 | Magnesium sulphate |
| MHAIDS | Mental health, addictions and intellectual disability service |
| MMWG | Maternity Morbidity Working Group |
| MOH | Ministry of Health |
| MQSP | Maternity Quality & Safety Programme |
| MVSC | Maternity vital signs chart |
| NE | Neonatal encephalopathy |
| NEWS | Newborn Early Warning Score |
| NGO | Non-governmental organisations |
| NICU | Neonatal intensive care unit |
| NMDS | National Minimum Dataset |
| NMMG | National Maternity Monitoring Group |
| NOC | Newborn Observation Chart |
| NZ | New Zealand |
| NZHRC | New Zealand Human Rights Commission |
| OA | Occiput anterior |
| OP | Occiput posterior |
| P2P | Power to Protect |
| PADA | Perinatal Anxiety & Depression Aotearoa |
| PAS | Placenta accrete spectrum |
| PHO | Primary Health Organisations |
| PIMS | Perinatal information management system |
| PMMRC | Perinatal and Maternal Mortality Review Committee |
| PMU | Paraparaumu maternity unit |
| PPROM | Preterm pre-labour rupture of membranes |
| PROM | Pre-labour rupture of membranes |
| PROMPT | Practical obstetric multi-professional training |
| QR | Quick response |
| RMO | Resident medical officer |
| SAC | Severity assessment code |
| SGA | Small for gestational age |
| SMMHS | Specialist Maternal Mental Health Service |
| SP | Standard primiparae |
| SUDI | Sudden unexplained death in infancy |
| VIP | Violence Intervention Programme |
| WHS | Women's Health Service |
| WRH | Wellington Regional Hospital |

| *Table 13:* **Definitions** | |
|---|---|
| Body mass index | A measure of weight adjusted for height. |
| Connect me | E-learning system at CCDHB |
| Constipation ladder (algorithm) | A guideline developed to provide a standardised, yet flexible, stepwise approach to constipation. |
| Dashboard | A modern analytics tool to monitor healthcare KPIs in a dynamic and interactive way |
| Deprivation | A lack of the types of diet, clothing, housing and environmental, educational, working and social conditions, activities and facilities which are customary in a society |
| Domicile | A person's usual residential address |
| Ethnicity | The ethnic group or groups that people identify with or feel they belong to |
| Fanau | Being born, bringing forth, having children, grandchildren, siblings, and extended families. |
| Jadelle | A hormone releasing sub-cutaneous implant |
| Jaydess | A hormone releasing intra-uterine device |
| Kairaranga | Traditional weaver |
| Kaupapa | Topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative. |
| Mirena | A hormone releasing intra-uterine device |
| Misoprostol | A synthetic prostaglandin medication used to induce labour |
| Morbidity | The consequences and complications (other than death) that result from a disease |
| Multidisciplinary team | A multidisciplinary team involves a range of health professionals working together to deliver comprehensive health care |
| Normothermia | The maintenance of normal core body temperature |
| Nulliparous | Has not given birth previously |
| Pākehā | New Zealander of European descent |
| Parity | The number of previous pregnancies that were carried to 20 weeks |
| Pēpi | A baby or infant |
| Qlik | An end-to-end cloud data integration and data analytics application |
| Robson 10 | A classification system by which all perinatal events and outcomes can be compared |
| Skin to skin | The baby is dried and laid directly on their mother's bare chest after birth |
| Tamariki | Children |
| Tertiary | Specialised consultative health care, usually for inpatients and on referral from a primary or secondary health professional |
| Wahakura | A woven flax bassinet for infants up to 5-6 months of age |
| Wānanga | Teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence |
| Whānau | Extended family, family group, a familiar term of address to a number of people |
| Whānau ora | An inclusive approach to providing services and opportunities to families |

# APPENDIX 3 – DATA SOURCES

The information in this report has been sourced from the following database systems:

- Quality improvement – CCDHB Business Intelligence and Analytics Unit and the CCDHB patient management system
- Maternity – from the Perinatal Information Management System (PIMS), outpatient data from the CCDHB patient management system
- The population figures for CCDHB come from the 2019 Population-Based Funding Formula projections, and the land areas are based on the 2013 census.
- The maternity population figures for New Zealand come from the Ministry of Health Qlik Sense hub for the year of 2020. The maternity population figures for CCDHB come from PIMS and the Maternity Clinical Indicators (MOH) Qlik application.

# APPENDIX 4 – REFERENCES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"Me mahi tahi tātou, mo te oranga o te katoa"
"We must work together for the wellbeing of all"
*- Māori proverb*